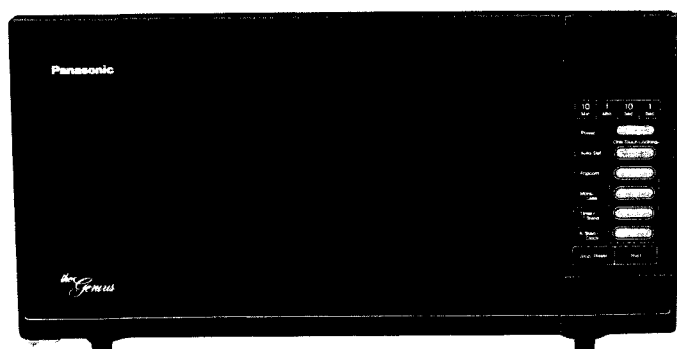


Service Manual

Microwave Oven



MODEL	U.S.A.	CANADA
	APH	CPH
NN-5750	—	○
NN-5730A	○	—
NN-5700A	○	—
NN-5700	○	—
NN-5470A	○	—
NN-5470	—	○
NN-5460A	○	—
NN-5460	○	—
NN-5550	—	○
NN-5530A	○	—
NN-5520A	○	—
NN-5510A	○	—
NN-5510	○	—
NN-5500A	○	—
NN-5500	○	—
NN-5360A	○	—
NN-5360	○	—

Specifications

Power Source :	120 V AC Single Phase 60 Hz
Power Requirement :	1,380 W (12.0 A)
Output :	700 W full power
Microwave Frequency :	2,450 MHz
Timer :	99 min. 99 sec.
Outside Dimensions :	12" (H) × 20-1/8" (W) × 14-1/2" (D) 306 mm (H) × 510 mm (W) × 360 mm (D)
Oven Cavity Dimensions :	7-7/8" (H) × 13" (W) × 13" (D) 200 mm (H) × 330 mm (W) × 330 mm (D)
Weight :	Approx. 31 lbs. Approx. 14 kg
Specifications subject to change without notice.	

Panasonic®

Matsushita Services Company
50 Meadowland Parkway,
Secaucus, New Jersey 07094

Matsushita Electric
of Canada Limited
5770 Ambler Drive, Mississauga,
Ontario, L4W 2T3

Panasonic Sales Company,
Division of Matsushita Electric
of Puerto Rico, Inc.
San Gabriel Industrial Park
65th Infantry Ave. Km. 9.5
Carolina, P.R. 00980

WARNING

1. This product should be serviced only by trained qualified personnel.
2. Though this product has been manufactured in compliance with:
"Federal Performance Standard 21 CFR Subchapter J" (D.H.H.S.): U.S.A. models
or "Radiation Emitting Devices Act" (NHW): Canadian models
it is very important all repairs should be made in accordance with procedures described in this manual to avoid being exposed to excessive microwave radiation.
3. Check for radiation leakage before and after every servicing according to the "procedure for measuring radiation leakage".
4. If the unit cannot be repaired on site, advise the customer not to use until unit be repaired.
5. Any serviceman who learns of any accident pertaining to microwave radiation leakage including the oven operating with open door should immediately notify the appropriate address listed below and Center for Devices and Radiological Health, DHHS.

IN U.S.A. (MSC) Matsushita Services Company
50 Meadowland Parkway,
Secaucus, New Jersey 07094
Attention: Engineering Support Division.
(201) 348-7000

IN PUERTO RICO (PSC) PSC
San Gabriel Industrial Park
65th Infantry Ave. Km.9.5
Carolina, Puerto Rico 00630
(809) 750-4300
Matsushita Electric of Canada Limited
5770 Ambler Drive, Mississauga,
Ontario, L4W2T3
(416) 624-5010

IN CANADA (MELCA)

6. There are special components used in the microwave oven which are important for safety. These parts are marked with a $\triangle$ on the replacement parts list. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent microwave leakage, shock, fire, or other hazards. Do not modify the original design.

PRECAUTIONS TO BE OBSERVED BEFORE AND DURING SERVICING TO AVOID POSSIBLE EXPOSURE TO EXCESSIVE MICROWAVE ENERGY

- (A) Do not operate or allow the oven to be operated with the door open.
- (B) Make the following safety checks on all ovens to be serviced before activating the magnetron or other microwave source, and make repairs as necessary:
 - (1) Interlock operation
 - (2) Proper door closing
 - (3) Seal and sealing surfaces (arcing, wear, and other damage)
 - (4) Damage to or loosening of hinges and latches.
 - (5) Evidence of dropping or abuse
- (C) Before turning on microwave power for any service test or inspection within the microwave generating compartments, check the magnetron, waveguide or transmission line, and cavity for proper alignment, integrity and connections.
- (D) Any defective or misadjusted components in the interlock, monitor, door seal, and microwave generation and transmission systems shall be repaired, replaced, or adjusted by procedures described in this manual before the oven is released to the owner.
- (E) A microwave leakage check to verify compliance with the Federal Performance Standard should be performed on each oven prior to release to the owner.

CONTENTS

	(page)
FEATURE CHART.....	3
CONTROL PANEL.....	4
OPERATION AND DIGITAL PROGRAMMER	
CIRCUIT TEST PROCEDURE.....	6
SCHEMATIC DIAGRAM.....	8
DESCRIPTION OF OPERATING SEQUENCE.....	10
CAUTIONS TO BE OBSERVED WHEN TROUBLESHOOTING.....	12
DISASSEMBLY AND PARTS REPLACEMENT PROCEDURE.....	13
COMPONENT TEST PROCEDURE.....	16
MEASUREMENTS AND ADJUSTMENTS.....	18
PROCEDURE FOR MEASURING MICROWAVE ENERGY LEAKAGE ..	19
TROUBLESHOOTING GUIDE.....	20
EXPLODED VIEW AND PARTS LIST.....	24
SCHEMATIC DIAGRAM & PARTS LIST OF DIGITAL PROGRAMMER CIRCUIT	30

FEATURE CHART (FOR NN MODEL)

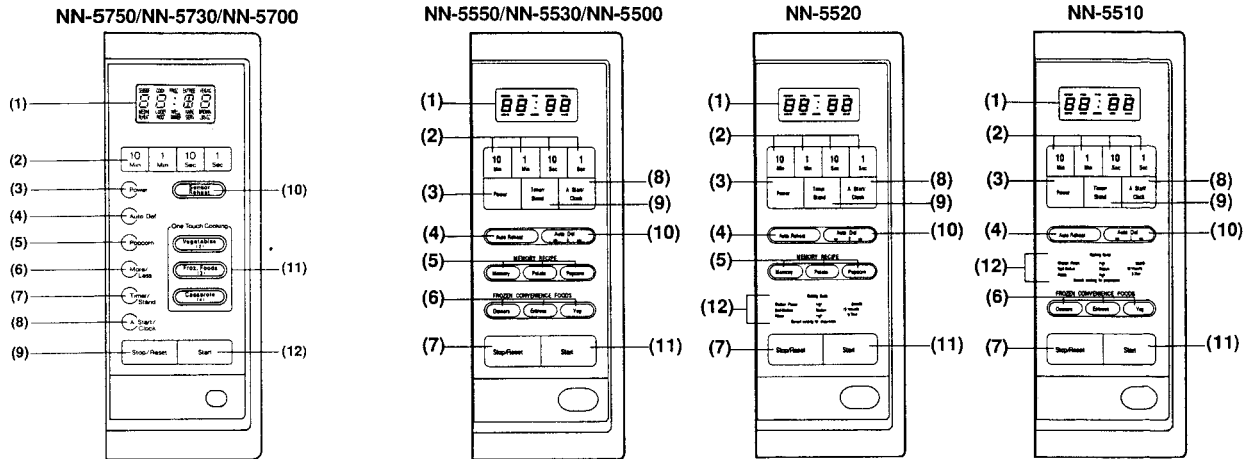
FEATURE	MODEL	NN-5750 NN-5730A NN-5700A NN-5700	NN-5550 NN-5530A NN-5500 NN-5500A	NN-5520A	NN-5510 NN-5510A	NN-5470A NN-5470	NN-5460 NN-5460A	NN-5360 NN-5360A
MEMORY STAGE		3	3	3	3	3	3	2
ONE TOUCH COOKING (AUTO SENSOR COOK)		○	—	—	—	—	—	—
AUTO DEFROST		○	○	○	○	○	—	—
AUTO REHEAT		—	○	○	○	○	—	—
SENSOR REHEAT		○	—	—	—	—	—	—
POTATO		—	○	○	—	—	—	—
POPCORN		○	○	○	—	—	○	—
MEMORY RECIPE		—	○	○	—	—	○	—
FROZEN CONVENIENCE FOODS		—	○	—	○	—	—	—
AUTO/START		○	○	○	○	○	○	—
TIMER/STAND		○	○	○	○	○	○	○
DIGITAL CLOCK		○	○	○	○	○	○	○
10-1 KEY		○	○	○	○	—	—	—
0-9 KEY		—	—	—	—	○	○	○

FEATURE CHART (FOR MQ MODEL)

FEATURE	MODEL	MQS0808W MQS0808H	MQS0806W MQS0806HC	MQS0803W MQS0803H MQS0803HC	MQS0804W	MQS080W
MEMORY STAGE		3	3	3	3	2
FROZEN CONVENIENCE FOODS		—	—	—	○	—
WEIGHT DEFROST		○	○	○	○	—
AUTO REHEAT		—	—	—	—	○
SENSOR REHEAT		○	○	—	—	—
CUSTOM SENSOR		○	—	—	—	—
POPCORN		○	○	○	—	—
MEMORY RECIPE		—	—	—	—	○
CONVENIENCE FOODS		—	○	○	—	—
SELECT SERVE REHEAT		—	—	—	○	—
PROGRAMMED REHEAT		—	○	—	—	—
SENSOR COOK		○	○	—	—	—
AUTO/START		○	○	○	○	—
TIMER/STAND		○	○	○	○	—
STAND		—	—	—	—	○
DIGITAL CLOCK		○	○	○	○	○
10-1 KEY		○	○	○	○	—
0-9 KEY		—	—	—	—	○

CONTROL PANEL (FOR NN MODEL)

Control Panel



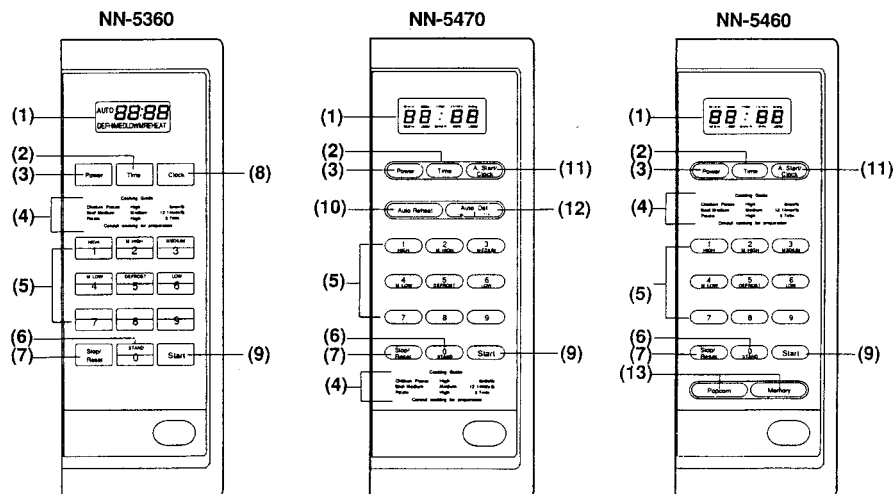
Controls with Auto Count-Up Feature*

- | | |
|--------------------------|-----------------------------|
| (1) Display Window | (9) Stop/Reset Pad |
| (2) Time Pads* | (10) Sensor Reheat Pad* |
| (3) Power Pad* | (11) One Touch Cooking Pads |
| (4) Auto Defrost Pad* | (Auto Sensor Cook) |
| (5) Popcorn Pad | Beef Pad* |
| (6) Doneness Control Pad | Vegetables Pad* |
| (More/Less Pad)* | Frozen Foods Pad* |
| (7) Timer/ Stand Pad | (12) Start Pad |
| (8) Auto Start/Clock Pad | |

Controls with Auto Count-Up Feature*

- | | |
|------------------------------|---|
| (1) Display Window | (6) Frozen Convenience Foods Pads* |
| (2) Time Pads* | (7) Stop/Reset Pad |
| (3) Power Pad* | (8) Auto Start/Clock Pad |
| (4) Auto Reheat Pad* | (9) Timer/ Stand Pad |
| (5) Memory Recipe Memory Pad | (10) Auto Defrost 1.0 Pound/0.1 Pound Pads* |
| Potato Pad* | (11) Start Pad |
| Popcorn Pad | (12) Cooking Guide |

Control Panel

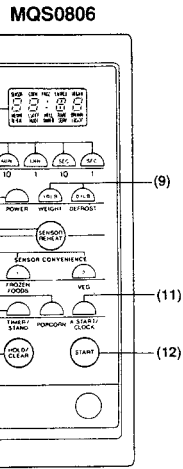
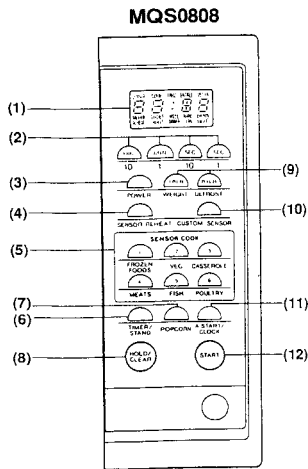


Controls with Auto Count-Up Feature*

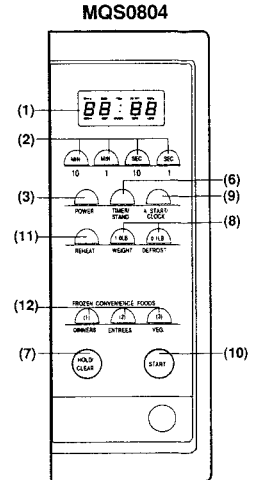
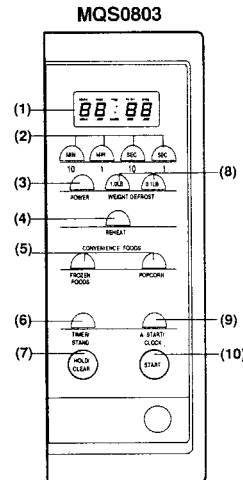
- | | |
|--------------------|---|
| (1) Display Window | (9) Start Pad |
| (2) Time Pad | (10) Auto Reheat Pad* |
| (3) Power Pad | (11) Auto Start/Clock Pad |
| (4) Cooking Guide | (12) Auto Defrost 1.0 Pound/0.1 Pound Pads* |
| (5) Number Pads | (13) Memory Recipe |
| (6) Stand Pad | Popcorn Pad |
| (7) Stop/Reset Pad | Memory Pad |
| (8) Clock Pad | |

CONTROL PANEL (FOR MQ MODEL)

Control Panel



Control Panel



Controls with Auto Count-Up Feature*

- | | |
|-----------------------|---------------------------|
| (1) Display Window | (6) Timer/Stand Pad |
| (2) Time Pads* | (7) Popcorn Pad |
| (3) Power Pad* | (8) Hold/Clear Pad |
| (4) Sensor Reheat Pad | (9) Weight Defrost |
| (5) Sensor Cook | 1.0 Pound/0.1 Pound Pads* |
| Veg. Pad* | (10) Custom Sensor Pad* |
| Meats Pad* | (11) Auto Start/Clock Pad |
| F.Foods Pad* | (12) Start Pad |

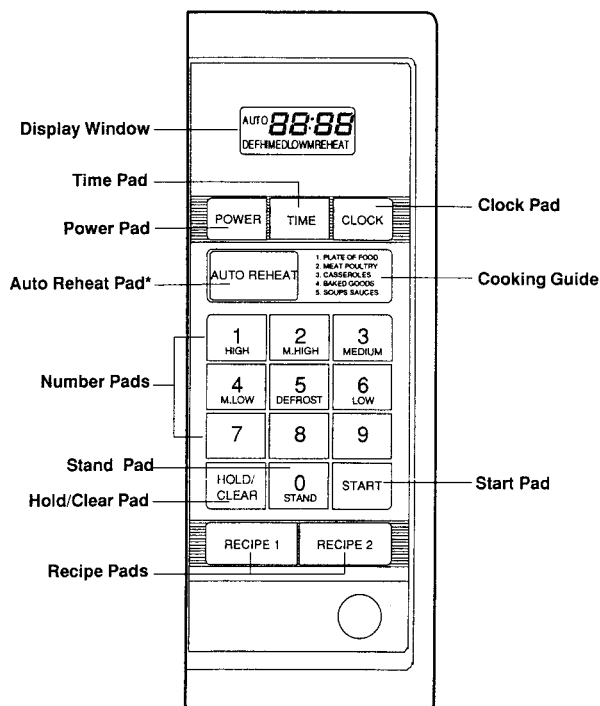
Controls with Auto Count-Up Feature*

- | | |
|----------------------------|-------------------------------|
| (1) Display Window | (8) Weight Defrost |
| (2) Time Pads* | 1.0 Pound/0.1 Pound Pads* |
| (3) Power Pad* | (9) Auto Start/Clock Pad |
| (4) Programmed Reheat Pad* | (10) Start Pad |
| (5) Convenience Foods | (11) Select Serve Reheat Pad* |
| Frozen Foods Pad* | (12) Frozen Convenience Foods |
| Popcorn Pad | Dinners Pad* |
| (6) Timer/Stand Pad | Entrees Pad* |
| (7) Hold/Clear Pad | Veg. Pad* |

Control Panel

MQS080

Controls with Auto Count-Up Feature*



OPERATION AND DIGITAL PROGRAMMER CIRCUIT TEST PROCEDURE

1. To Set Clock

OPERATION	DISPLAY
1. Plug the power supply cord into wall receptacle.	88:88
2. Tap Clock pad.	*
3. Enter time of day (TOD) by tapping appropriate number pads.	11*25
4. Tap Clock pad. TOD has now been registered into the digital programmer circuit and will count up by minutes.	11:25

2. Time Cooking For Two Stage (10, 1 Key Models)

OPERATION	DISPLAY
1. Place a water load in the oven.	
2. Tap Power pad once for High power. (1st stage)	HI
3. Set for 5 seconds by tapping Number pad.	5
4. Tap Power pad 3 times for Medium power. (2nd stage)	MED
5. Set for 10 seconds by tapping Number pad.	10
6. Tap Start pad.	5

OPERATION	DISPLAY
7. When first stage cooking time has elapsed, oven automatically switches to 2nd stage cooking.	10 MED
8. When 2nd stage cooking time has elapsed, oven beeps 5 times and shuts off.	

3. Time Cooking (NN-5360/NN-5470/NN-5460/QSQ080W)

OPERATION	DISPLAY
1. Place a water load in the oven.	
2. Tap Power pad.	HI
3. Tap 4 pad for setting M.Low power.	MED LO
4. Tap Time pad.	0 MED LO
5. Set for 1 minute by tapping Number pads.	1 00 MED LO
6. Tap Start pad.	59 MED LO
7. When cooking time has elapsed, oven beeps 5 times and shuts off.	

4. Auto/Weight Defrost

OPERATION	DISPLAY
1. Tap Auto Def or 1.0 (lb) Pad.	
2. Set the weight for 3 pounds by tapping 1.0 (lb) pad or Auto Def .	
3. Tap Start Pad. NN-Models : 21 min 00 sec. MQ-Models : 24 min 30 sec. Refer to page 10 for cooking time.	
4. Tap Stop/Reset Pad twice Oven shuts off.	TOD reappears in the display window.

5. Auto Reheat

(NN-5550/5530/5520/5510/5500/QMS080W)

OPERATION	DISPLAY
1. Tap Auto Reheat Pad.	
2. Tap Start Pad.	
3. When cooking time has elapsed. • Oven beeps five times and shuts off.	• TOD reappears in the display window.

6. Potato (NN-5550/5530/5520/5500)

OPERATION	DISPLAY
1. Tap Potato pad.	
2. Tap Start pad.	
3. When cooking time has elapsed. • Oven beeps five times and shuts off.	• TOD reappears in the display window.

7. One Touch Cooking (Auto Sensor Cooking)

NOTE: Make sure that the outer panel is installed before Auto Sensor Cooking Test, since Auto Sensor function does not operate properly without the outer panel.

OPERATION	DISPLAY
1. Pour 150 ± 15cc (4.5 ± 1/2 ozs) of room temperature water in a beaker, securely cover the top of the beaker with plastic wrap and place the beaker in the center of the oven.	COVER THE TOP OF THE BEAKER WITH PLASTIC WRAP
2. Tap Vegetables Pad once.	
3. Tap Start Pad.	
4. The steam sensor detects steam about 2 to 5 minutes after the Start Pad is tapped. Auto Sensor Cooking (T1) automatically switches to time cooking (T2). "2" disappears with beep sounds and the remainder of cooking time appears in display window. NOTE: Cooking time will vary depending on the water temperature, the shape of beaker or the power source voltage. NOTE: K factor for 2 program is 1.4/1.8.	
5. When the balance of cooking time has elapsed, oven stops and beeps five times.	• TOD reappears in the display window.

8. Frozen Convenience Foods

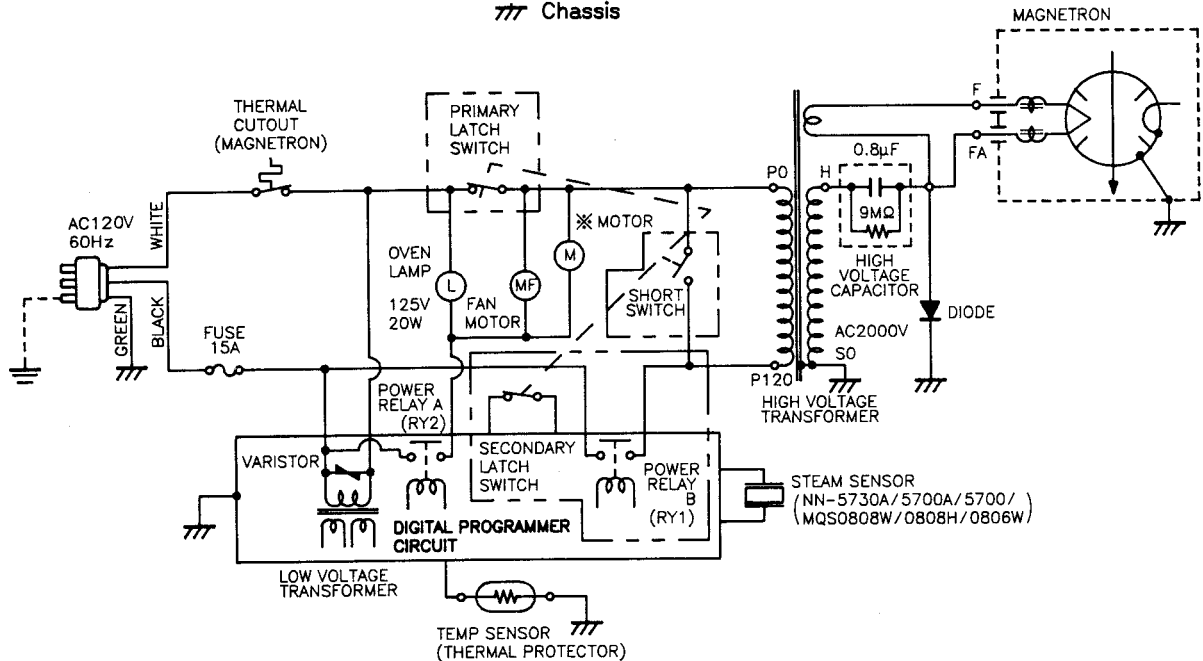
(NN-5550/5530/5510/5500/QMS0804W)

OPERATION	DISPLAY
1. Tap Frozen Convenience Foods Pads.	
2. Tap Start pad.	
3. When cooking time has elapsed, oven beeps five times and shuts off.	• TOD reappears in the display window.

SCHEMATIC DIAGRAM (APH/AQH)

NOTE: Door is closed.
Unit is not operated.

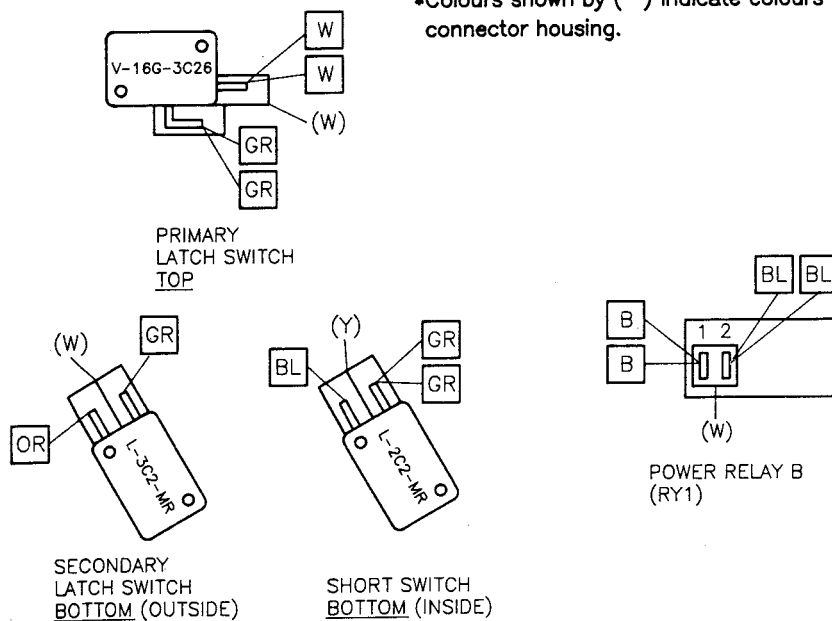
≡ Ground
/// Chassis



※ TURNTABLE OR STIRRER MOTOR IS USED DEPENDING ON CHASSIS.

WIRING DIAGRAM

NOTE: *When replacing, check the lead wire colour as shown.
*Colours shown by () indicate colours of lead wire connector housing.



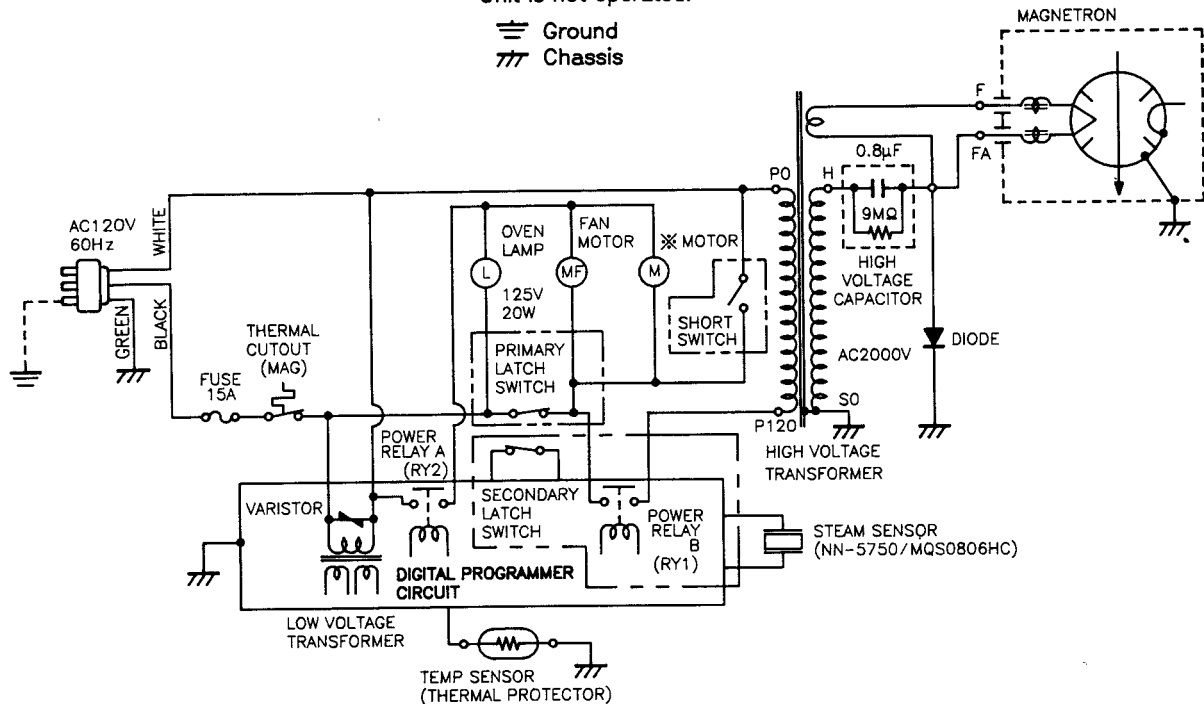
SYMBOL	COLOUR
OR	ORANGE
BL	BLUE
BR	BROWN
W	WHITE
Y	YELLOW
R	RED
GR	GRAY
B	BLACK

S-567H etc
60-01 9

SCHEMATIC DIAGRAM (CPH/CQH)

NOTE: Door is closed.
Unit is not operated.

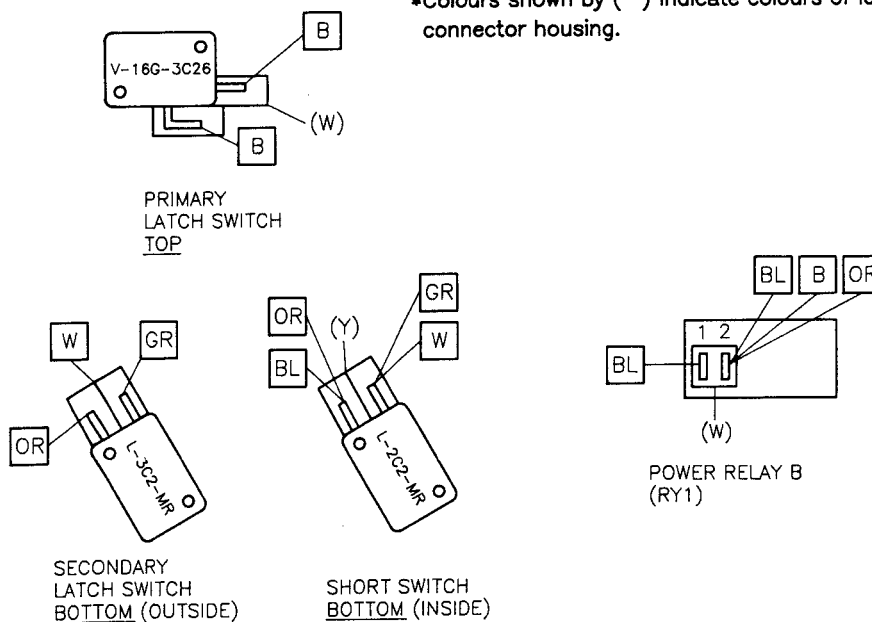
≡ Ground
≡≡ Chassis



※ TURNTABLE OR STIRRER MOTOR IS USED DEPENDING ON CHASSIS.

WIRING DIAGRAM

NOTE: *When replacing, check the lead wire colour as shown.
*Colours shown by () indicate colours of lead wire connector housing.



SYMBOL	COLOUR
OR	ORANGE
BL	BLUE
BR	BROWN
W	WHITE
Y	YELLOW
R	RED
GR	GRAY
B	BLACK

S-567H etc
60-020

DESCRIPTION OF OPERATING SEQUENCE

1. Variable power cooking control

The coil of power relay B (RY1) is energized intermittently by the digital programmer circuit, when the oven is set at any power selection except for High power position. The digital programmer circuit controls the ON-OFF time of power relay B contacts in order to vary the output power of the microwave oven from "Warm" to "High" power. One complete ON and OFF cycle of power relay B is 22 seconds. The relation between indications on the control panel and the output of the microwave oven is as shown in table.

NOTE: The ON/OFF time ratio does not correspond with the percentage of microwave power since approximately 2 seconds are required for heating of magnetron filament.

2. Auto defrost, Auto reheat, Potato, Frozen convenience food cook control

When those Auto Control feature is selected and the Start Pad is tapped:
(A) The digital programmer circuit determines the power level and cooking time to complete cooking and indicates the operating state in the display window.

Table shows the corresponding cooking times for respective serving by categories.

(B) When cooking time in the display window has elapsed, the oven turns off automatically by a control signal from the digital programmer circuit.

POWER SETTING	OUTPUT POWER(W) APPROX.	ON-OFF TIME OF POWER RELAY B (RY1)	
		ON(SEC)	OFF(SEC)
HIGH	700	22	0
MEDIUM-HIGH	490	17	5
MEDIUM	370	13	9
MEDIUM-LOW	210	8	14
LOW	80	4	18
DEFROST	210	8	14

Auto Defrost (For NN Model and MQS0804)

WEIGHT SELECTED	TOTAL DEFROSTING TIME
1 LB	4 min. 00 sec.
3 LB	21 min. 00 sec.

Auto Defrost (MQS0808/0806/0803)

WEIGHT SELECTED	TOTAL DEFROSTING TIME
1 LB	6 min. 00 sec.
3 LB	24 min. 30 sec.

Auto Reheat

(NN-5550/5530/5520/5510/5500/5470/5460/MQS0804)

SERVICING	COOKING TIME
2	4 min. 00 sec.
4	6 min. 30 sec.

Auto Reheat (MQS0808/0806/0803/080)

CATEGORY	COOKING TIME
2	2 min. 00 sec.
4	15 sec.

Frozen Convenience Foods

(NN-5550/5530/5510/5500/MQS0804)

CATEGORY	COOKING TIME
DINNER 11 oz	8 min. 00 sec.
ENTREE 7 oz	6 min. 40 sec.
VEGETABLE 10 oz	7 min. 00 sec.

Potato (NN-5550/5530/5520/5500)

QUANTITY	COOKING TIME
Potato 1 pc	7 min. 00 sec.

4. Auto sensor cooking

Auto sensor cooking is a revolutionary way to cook by microwave without setting a power level or selecting a time. All that is necessary is to select an Auto Sensor Program before starting to cook.

Understanding Auto Sensor Cooking

As a food cooks, a certain amount of steam is produced. If the food is covered, this steam builds up and eventually escapes from the container. In Auto Sensor Cooking, a carefully designed instrument, called the steam sensor element, senses this escape of steam. Then, based upon the Auto Sensor Program selected, the unit will automatically determine the correct power level and the proper length of time it will take to cook the food.

NOTE: Auto Sensor Cooking is successful with the foods and recipes found in the Auto Sensor Cooking Guide. Because of the vast differences in food composition, items not mentioned in the Cooking Guide should be prepared in the microwave oven using power select and time features. Please consult Variable Power Microwave Cookbook for procedures.

Explanation of the Auto Sensor Cooking process

- 1) During the first 10 second period there is no microwave activity, and when calculating the T2 time by using the formula below make sure this 10 seconds is subtracted from the T1 time. In other words T1 time starts at the end of the 10 second period.
- 2) **T1 time**.....The total amount of time it takes the microwave oven to switch to T2 time after the 10 second period.
- 3) **T2 time**.....When the steam escapes from the cooking container placed in the oven, the steam sensor detects it and the microprocessor calculates the balance of cooking time. This T2 time is then shown in the display and begins counting down.

Balance of cooking time (T2 time)

The balance of cooking time which is called T2 time, can be calculated by the following formula.

$$T2 \text{ time (in sec.)} = T1 \text{ time} \times K \text{ factor}$$

NOTE: Remember, the T1 time starts after the 10 second period. The coefficient K is programmed into the microprocessor memory and they are listed in the following tables along with the P1 and P2 powers.

NOTE: When "More" or "Less" pad is selected, the K factor varies resulting in T2 time to be increased or decreased.

Example of calculating the T2 time

Example 1: If the T1 time is measured to be 2 minutes and 40 seconds after the 10 second period, and the Auto program selected is VEGETABLES (ROOT-VEG 1):

$$\begin{aligned} T2 &= T1 \times K \\ &= 2 \text{ min. and } 40 \text{ sec.} \times 1.4/1.8 \\ &= 160 \text{ sec.} \times 1.4/1.8 \\ &= 224/228 \text{ sec.} \\ &= 3 \text{ min. } 44 \text{ sec.} / 4 \text{ min. } 48 \text{ sec.} \end{aligned}$$

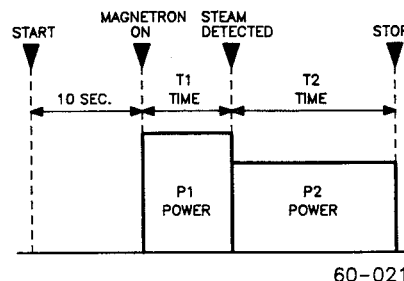
5. Auto Sensor Reheat

Auto Reheat is a quick and easy way to reheat refrigerator and room temperature foods.

Simply press the reheat pad. There is no need to select power level and cooking time.

NOTE: The Auto Sensor Reheat process is same as Auto Sensor Cooking process.

AUTO SENSOR COOKING/REHEAT PROCESS



Auto Sensor Cook (NN-5750/5730/5700)

CATEGORY	P1 Power	P2 Power	K factor Standard
VEGETABLES ROOT-VEG	HIGH	M.HIGH	1.4
FROZEN-FOODS DINNERS	M.HIGH	M.HIGH	0.3

Auto Sensor Cook (MQS0808/0806)

CATEGORY	P1 Power	P2 Power	K factor Standard
VEGETABLES ROOT-VEG	HIGH	M.HIGH	1.8
FROZEN-FOODS DINNERS	M.HIGH	M.HIGH	0.2

Auto Sensor Reheat (NN-5750/5730/5700/MQS0808/0806)

Category	P1 Power	P2 Power	K factor
1. Room Temp Foods	High	Warm	0.1

CAUTIONS TO BE OBSERVED WHEN TROUBLESHOOTING

Unlike many other appliances, the microwave oven is high-voltage, high-current equipment. Though it is free from danger in ordinary use, extreme care should be taken during repair.

CAUTION

Servicemen should remove their watches whenever working close to or replacing the magnetron.

1. Check the grounding

Do not operate on a 2-wire extension cord. The microwave oven is designed to be used when grounded. It is imperative, therefore, to make sure it is grounded properly before beginning repair work.

2. Warning about the electric charge in the high voltage capacitor

For about 30 seconds after the oven is turned off, an electric charge remains in the high voltage capacitor.

When replacing or checking parts, remove the power plug from the outlet and short the terminal of the high voltage capacitor (terminal of lead wire from diode) to chassis ground with an insulated handle screwdriver to discharge.

WARNING

There is high-voltage present, with high-current capabilities in the circuits of the high voltage winding and filament winding of the high voltage transformer. It is extremely dangerous to work on or near these circuits with oven energized.

DO NOT measure the voltage in the high voltage circuit including filament voltage of magnetron.

WARNING

Never touch any circuit wiring with your hand nor with an insulated tool during operation.

3. When parts must be replaced, remove the power plug from the outlet.

4. When the 15 Amp fuse is blown due to the operation of short switch:

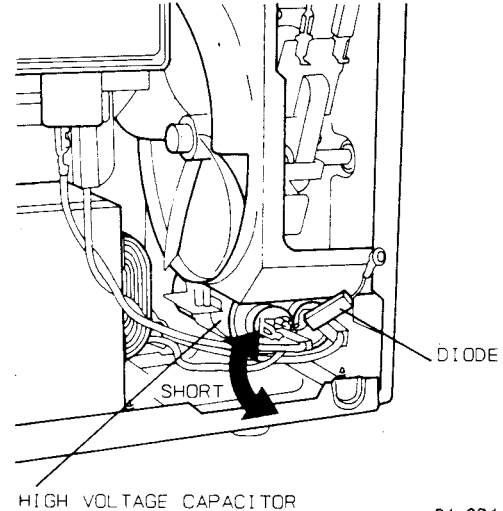
WARNING

When the 15 Amp. fuse is blown due to the operation of short switch, you must replace Primary latch switch and short switch. For U.S.A. models, also replace power relay B (RY1) when the continuity check reads shorted contacts (1-2).

- (A) This is mandatory. Refer to "Adjustments and Measurement" for these switches.
- (B) When replacing the fuse, confirm that it has the appropriate rating for these models.
- (C) When replacing faulty switches, be sure mounting tabs are not bent, broken or otherwise deficient in their ability to hold the switches.

5. Avoid inserting nails, wire, etc. through any holes in the unit during operation.

Never insert a wire, nail or any other metal object through the lamp holes on the cavity or any other holes or gaps, because such objects may work as an antenna and cause microwave leakage.



Touch chassis side first then short to the high voltage capacitor terminal.

6. Confirm after repair

- (A) After repair or replacement of parts, make sure that the screws of the oven, etc. are neither loose nor missing. Microwaves might leak if screws are not properly tightened.
- (B) Make sure that all electrical connections are tight before inserting the plug into the wall outlet.
- (C) Check for microwave energy leakage. (Refer to procedure for measuring microwave energy leakage.)

DISASSEMBLY AND PARTS REPLACEMENT PROCEDURE

1. Magnetron

- (A) Discharge the high voltage capacitor.
- (B) Remove 2 screws holding magnetron thermal cutout.
- (C) Remove 1 screw holding air guide A.
- (D) Disconnect 2 high voltage lead wires from magnetron filament terminals.
- (E) Remove 4 screws holding the magnetron.

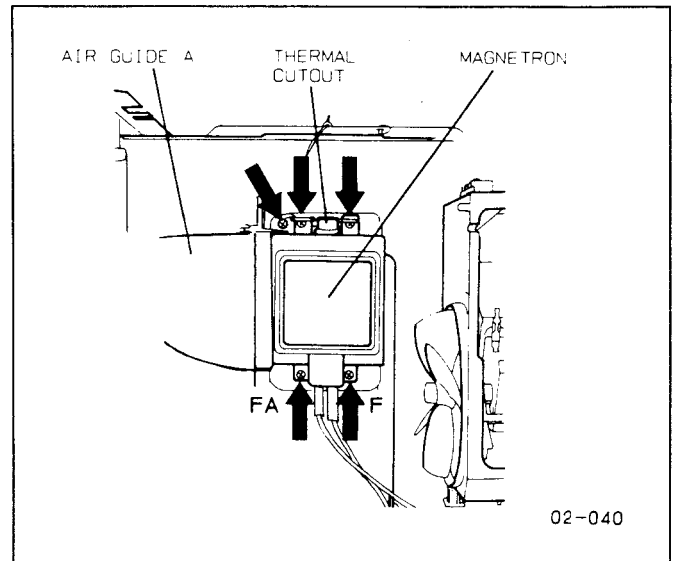
NOTE: After replacement of the magnetron, tighten mounting screws properly making sure there is no gap between the waveguide and the magnetron to prevent microwave leakage.

CAUTION

When replacing the magnetron, be sure the antenna gasket is in place.

CAUTION

When connecting 2 filament lead wires to the magnetron terminals, be sure to connect the lead wires in the correct position. The lead wire of high voltage transformer should be connected to "F terminal" and the lead wire from high voltage capacitor should be connected to "FA terminal".



2. Digital programmer circuit (DPC) and membrane key board.

NOTE: Be sure to ground any static electric charge built up on your body, before handling the DPC.

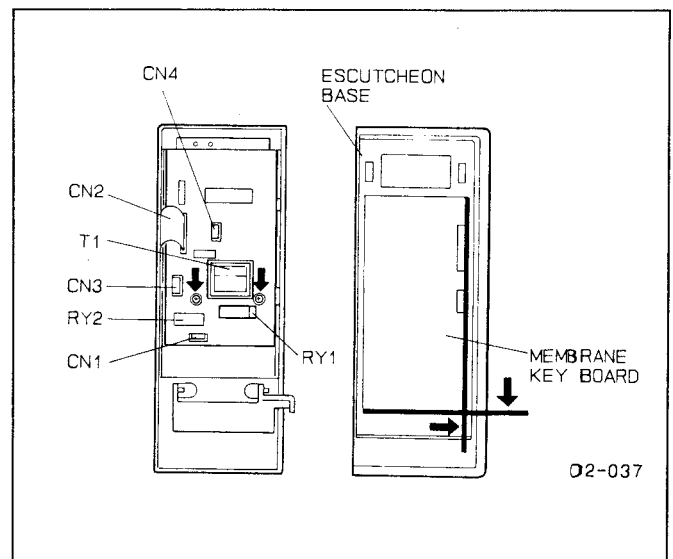
- (A) Disconnect all connectors from D.P.C.
- (B) Remove 1 screw holding escutcheon base and slide the escutcheon base upward slightly.
- (C) Release CN2 connector's lock of DPC by pushing both levers to inside and pull them upward, and remove flat cable of membrane key board.
- (D) Remove 2 screws holding DPC.

To replace membrane key board

- (E) Remove escutcheon bracket from escutcheon base by freeing 4 catch hooks on the escutcheon base.
- (F) Peel off the tub of membrane key board from escutcheon base.
- (G) Peel off display filter from escutcheon base.
- (H) Push the upper part of key board (display window portion) from back of escutcheon base and peel off membrane key board completely from escutcheon base.

NOTE 1. The membrane key board is attached to the escutcheon base with double faced adhesive tape.

- 2. When installing new membrane key board, make sure that the surface of escutcheon base is cleaned sufficiently so that any problems (shorted contacts or uneven surface) can be avoided.
- 3. Make sure that new membrane key board is aligned to the right and lower edges of the escutcheon base. (see figure)



3. Low voltage transformer and/or power relays (RY1, RY2)

NOTE: Be sure to ground any static electric charge built up on your body before handling the DPC.

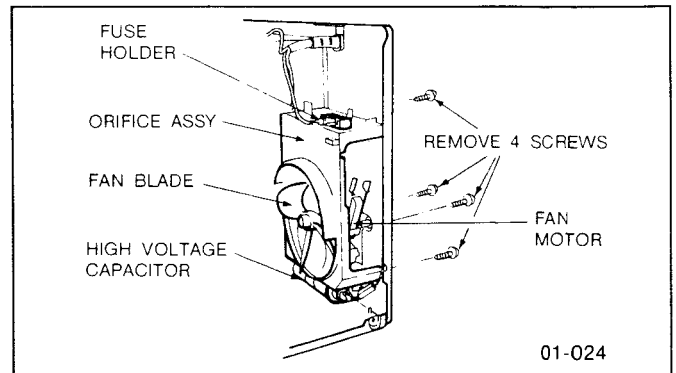
- (A) Using solder wick or a desoldering tool and 30W soldering iron, carefully remove all solder from the terminal pins of the low voltage transformer and/or power relays.

NOTE: Do not use a soldering iron or desoldering tool of more than 30 watts on DPC contacts.

- (B) With all the terminal pins cleaned and separated from DPC contacts, remove the defective transformer/power relays and install new transformer/power relays making sure all terminal pins are inserted completely. Resolder all terminal contacts carefully.

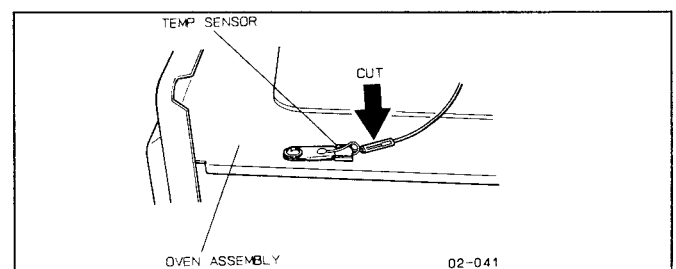
4. Fan motor.

- Disconnect 2 lead wires from fan motor terminals.
- Disconnect 2 lead wires from fuse holder terminals.
- Disconnect 4 high voltage lead wires from high voltage capacitor terminals.
- Remove 4 screws holding fan motor and orifice assy and detach the orifice assy with fan motor from oven assy.
- Remove fan blade from the fan motor shaft by pulling it straight out.
- Separate the fan motor from the orifice assy by freeing 2 catch hooks on the orifice assy.



5. Temp sensor (thermal protector)

- Cut a lead wire at the top of sensor terminals.
- Remove 1 screw holding the temp sensor and replace with new one.
- Solder the lead wires securely to the sensor terminals.

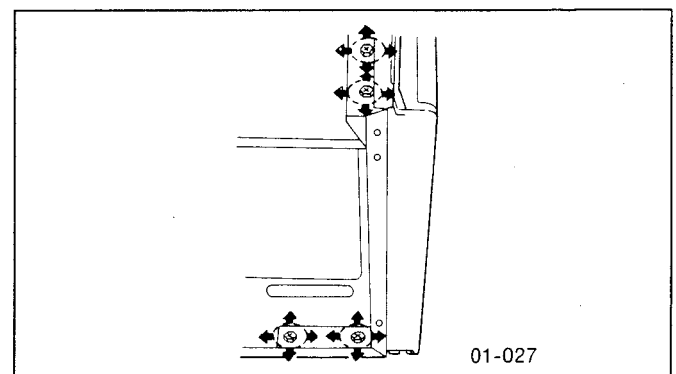
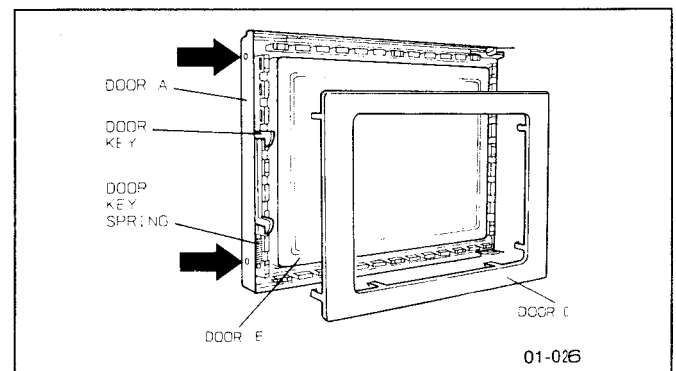


6. Door assembly

- Open the door and remove door C from door E by carefully pulling outward starting from upper right hand corner.
- Remove door key and door key spring.
- Remove 3 screws holding side and bottom frames of door A.
- Separate the door A from the door E by freeing 6 catch hooks on the door A using a flat screwdriver.

After replacement of the defective component parts of the door, reassemble it and follow the instructions below for proper installation and adjustment so as to prevent an excessive microwave leakage.

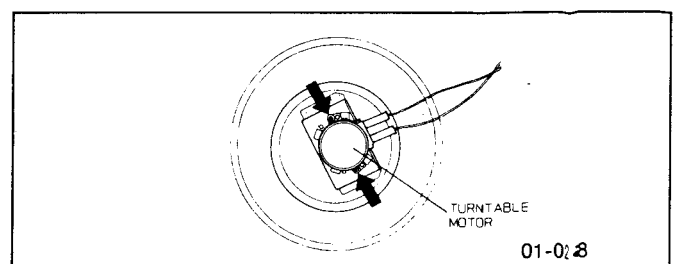
- When mounting the door to the oven, be sure to adjust the door parallel to the bottom line of the oven face plate by moving the upper hinge and lower hinge in the direction necessary for proper alignment.
- Adjust so that the door has no play between the inner door surface and oven front surface. If the door assembly is not mounted properly, microwave may leak from the clearance between the door and oven.
- Perform the microwave leakage test.



7. Turntable motor.

(For NN-5700/5460/5510/5500/5360)

- Remove 2 screws holding motor cover.
- Disconnect 2 lead wires from turntable motor.
- Remove 2 screws holding turntable motor.



8. Turntable motor

(For NN-5730A/5700A/5470A/5460A/5530A/5520A/
NN-5510A/5500A/5360A and MQ Models)

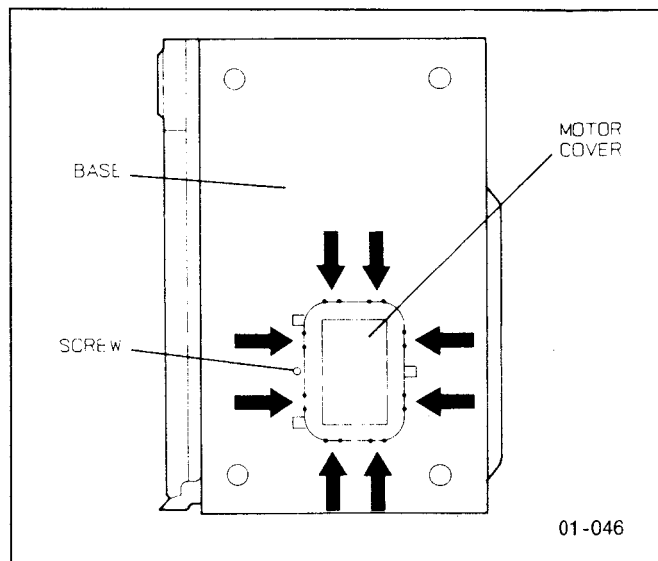
(A) Remove the motor cover by breaking off at the 8 spots indicated by arrows with a cutter or the like. (See Figure)

NOTE: After breaking off the motor cover, make sure that cut-off portions are properly trimmed off or bend to inside so that no sharp edge will expose to outside.

(B) Disconnect 2 lead wires connected to the stirrer motor.

(C) Remove the stirrer motor by removing 2 screws.

NOTE: To reinstall the motor cover, use 4X6 screw.



9. Floor shelf and/or moving antenna.

(For MQ Models)

(A) Insert a phillips type screwdriver or equivalent approx. 2" (5cm) in shaft length in the hole of left side oven wall as shown in Figure.

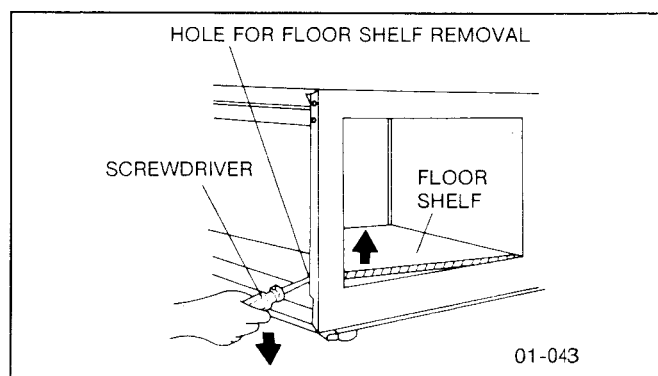
(B) Carefully lift up the floor shelf by using the screwdriver until the floor shelf is lifted up over the level of oven opening front.

(C) Remove the floor shelf by lifting it up from oven front.

To replace moving antenna.

(D) Remove the moving antenna by simply lifting it up off the stirrer motor shaft.

NOTE: When replacing the moving antenna, make sure the plastic stirrer spacers are correctly in place.



10. Steam sensor

(A) Remove 1 screw holding steam sensor unit.

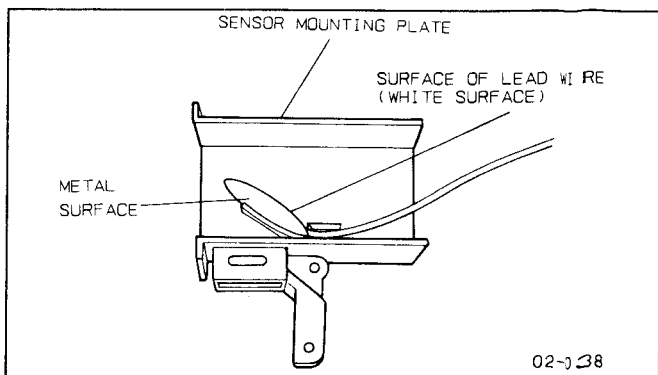
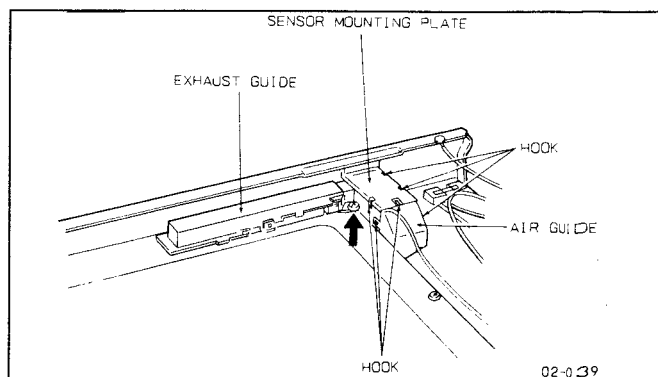
(B) Disconnect CN4 connector from digital programmer circuit board.

(C) Remove exhaust guide from steam sensor unit.

(D) Remove catch hooks on sensor mounting plate and air guide.

(E) Remove steam sensor from sensor mounting plate.

NOTE: When installing the steam sensor, make sure that the direction of steam sensor is as shown in figure.



COMPONENT TEST PROCEDURE

CAUTION

1. High voltage is present at the high voltage terminal of the high voltage transformer during any cook cycle.
2. It is neither necessary nor advisable to attempt measurement of the high voltage.
3. Before touching any oven components, or wiring, always unplug the oven from its power source and discharge the high voltage capacitor.

1. Primary Latch Switch, Secondary (Secondary Latch Switch and Power relay B) Interlocks.

- (A) Unplug lead connectors to Power Relay B and verify continuity of the power relay B 1-2 terminals.
- (B) Unplug lead connectors to Primary Latch Switch and Secondary Latch Switch.
- (C) Test the continuity of switches at door opened and closed positions with ohm meter (low scale).
Normal continuity readings should be as follows.

	Door Opened	Door Closed
Primary Latch Switch	$\infty \Omega$ (open)	0 Ω (close)
Secondary Latch Switch	$\infty \Omega$ (open)	0 Ω (close)
Power Relay B	$\infty \Omega$ (open)	$\infty \Omega$ (open)

2. Short Switch & Monitor Circuit

- (A) Unplug lead wires from H.V. transformer primary terminals.
- (B) Connect test probes of ohm meter to the disconnected leads which were connected to H.V. Transformer.
- (C) Test the continuity of short switch with door opened and closed positions using lowest scale of the ohm meter.
Normal continuity readings should be as follows.

Models	Door closed	Door opened
Touch Models	$\infty \Omega$	0 Ω
Mechanical Models	Some Ohm See Note	0 Ω

NOTE: In this case, the ohm meter indicates some resistance of the part(s) such as oven lamp, blower fan motor, etc. connected in parallel with the monitor circuit.

3. High voltage transformer

- (A) Remove connections from the transformer terminals and check continuity.
- (B) Normal (cold) resistance readings should be as follows:
 Secondary winding..... Approx. 80 Ω ~ 120 Ω
 Filament winding..... Approx. 0 Ω
 Primary winding Approx. 0 Ω ~ 1 Ω

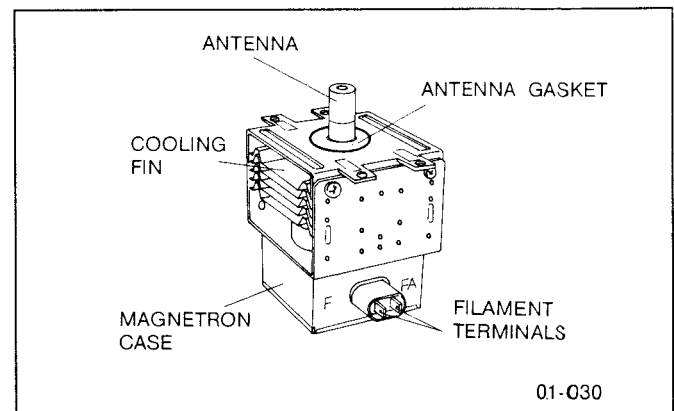
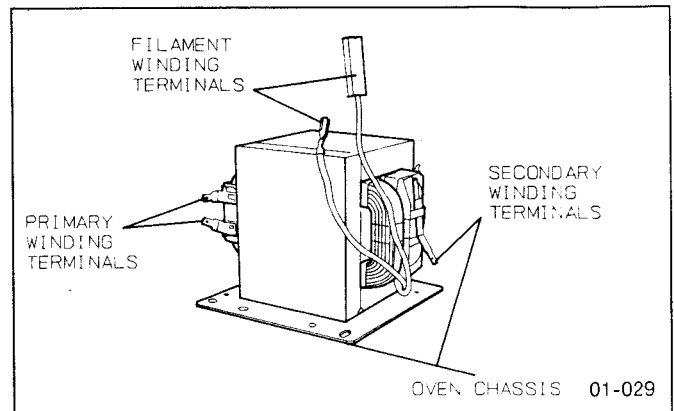
4. High voltage capacitor

- (A) Check continuity of capacitor with meter on highest OHM scale.
- (B) A normal capacitor will show continuity for a short time, and then indicate 9M Ω once the capacitor is charged.
- (C) A shorted capacitor will show continuous continuity.
- (D) An open capacitor will show constant 9M Ω .
- (E) Resistance between each terminal and chassis should be infinite.

5. Magnetron

Continuity checks can only indicate an open filament or a shorted magnetron. To diagnose for an open filament or shorted magnetron.

- (A) Isolate magnetron from the circuit by disconnecting the leads.
- (B) A continuity check across magnetron filament terminals should indicate one ohm or less.
- (C) A continuity check between each filament terminal and magnetron case should read open.



6. Diode

- (A) Isolate the diode from the circuit by disconnecting the leads.
- (B) With the ohmmeter set on the highest resistance scale, measure the resistance across the diode terminals. Reverse the meter leads and again observe the resistance reading. Meter with 6V, 9V or higher voltage batteries should be used to check the front-to-back resistance of the diode, otherwise an infinite resistance may be read in both directions.
- A normal diode's resistance will be infinite in one direction and several hundred $k\Omega$ in the other direction.

7. Membrane key board (Membrane switch assembly)

Check continuity between switch terminals, by tapping an appropriate pad on the key board. The contacts assignment of the respective pads on the key board is as shown in digital programmer circuit.

8. Steam Sensor and digital programmer circuit

CAUTION

Do not touch any parts of the circuitry on the digital programmer circuit since static electric discharge may damage this control panel.

Always ground yourself while working on this panel to discharge any static charge built up on your body.

In order to determine if the steam sensor function of the digital programmer circuit is in working order or not, do the following test.

- 1) Place a water load (150 cc) in the oven.
- 2) Set Sensor Reheat by tapping pad.
- 3) Tap Start Pad.
- 4) Steam Sensor detects steam about 2 to 5 minutes after the Start Pad is tapped.
- 5) T1 time cooking automatically switch to remaining time cooking. (T2)
- 6) The remaining of cooking time (T2) appears in display window. If the following cooking time appear Steam Sensor function is normal.

T1 TIME	T2 TIME (Remaining cooking time)
2 Min. ~ 5 Min.	12 Sec. ~ 30 Sec.

9. Temp sensor (Thermal protector)

A temp sensor is mounted on top of the oven cavity at the left side. Its purpose is to automatically shut off the oven in case the cavity overheats for any reason.

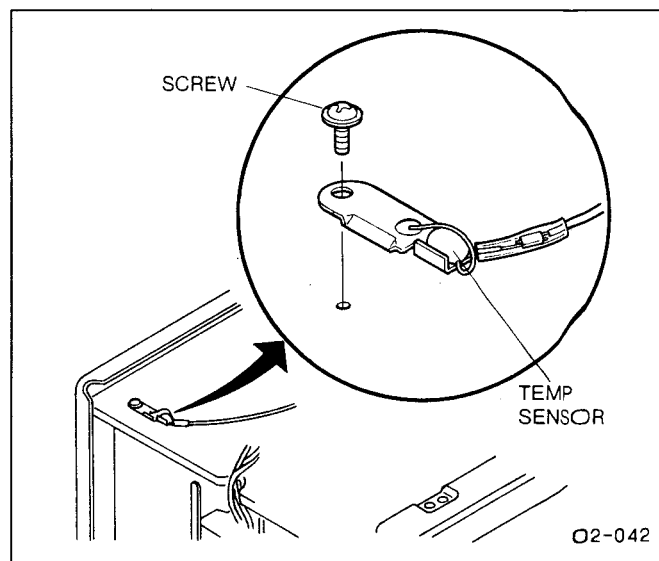
The thermal protector will operate at 257°F (125°C).

The device is connected to the DPC on touch control models. When the thermal protector exceeds its temperature it will turn off the power to oven cavity and display will go to reset mode.

The cooking program can be reset after cool-down.

THERMISTOR RESISTANCE VALUE

30K-120K at 10°C-30°C (50°F-86°F)



MEASUREMENTS AND ADJUSTMENTS

WARNING

- * For continued protection against radiation hazard, replace only with identical replacement parts (For touch models Part No. ANE61424L0AG, Type No. V-16G-3C26 for Primary latch switch Part No. A61424650AP, Type No. L-3C2-MR for Secondary latch switch and Part No. ANE6178-5R0, Type No. L-2C2-MR for short switch.)
- * When the 15 Amp. fuse is blown due to the operation of short switch, you must replace Primary latch switch and short switch. For U.S.A. models, also replace power relay B (Part No. AEG5J1EG12, Type No. G5J-1-TP) when the continuity check reads shorted contacts (1 — 2). Then follow the adjustment procedures below.
- * Interlock switch replacement — In replacing faulty switches, be sure mounting tabs are not bent, broken or otherwise deficient in their ability to hold the switches.
- * Refer to schematic diagram to ensure proper connection.

1. Adjustment of Primary latch switch, Secondary latch switch and short switch

- (A) When mounting Primary latch switch, Secondary latch switch and short switch to door hook assembly, mount the Primary latch switch, the Secondary latch switch and the short switch to the door hook assembly as shown in table.

NOTE: No specific adjustment during installation of Primary latch switch, Secondary latch switch and short switch to the door hook is necessary.

- (B) When mounting the door hook assembly to the oven assembly, adjust the door hook assembly by moving it in the direction of arrow in table so that the oven door will not have any play in it. Check for play in the door by pulling the door assembly. Make sure that the latch keys move smoothly after adjustment is completed. Completely tighten the screws holding the door hook assembly to the oven assembly.
- (C) Reconnect the short switch and check the continuity of the monitor circuit and all latch switches again by following the components test procedures.

2. Measurement of microwave output

The power output of the magnetron can be determined by performing a simple water heating test as described below.

Necessary Equipment:

- *1 liter beaker *Glass thermometer
- *Wrist watch or stopwatch

NOTE: Check the line voltage under load. Low voltage will lower the magnetron output. Take the temperature readings and heating time as accurate as possible.

- (A) Fill the beaker with exactly one liter of tap water. Stir the water using the thermometer and record each beaker's temperature (recorded as T1).
- (B) Place the beaker on the center of glass cook plate. Set the oven for High power and heat it for exactly one minute.
- (C) Stir the water again and read the temperature of the beaker (recorded as T2).
- (D) The normal temperature rise at High power position for each models is as shown in table.

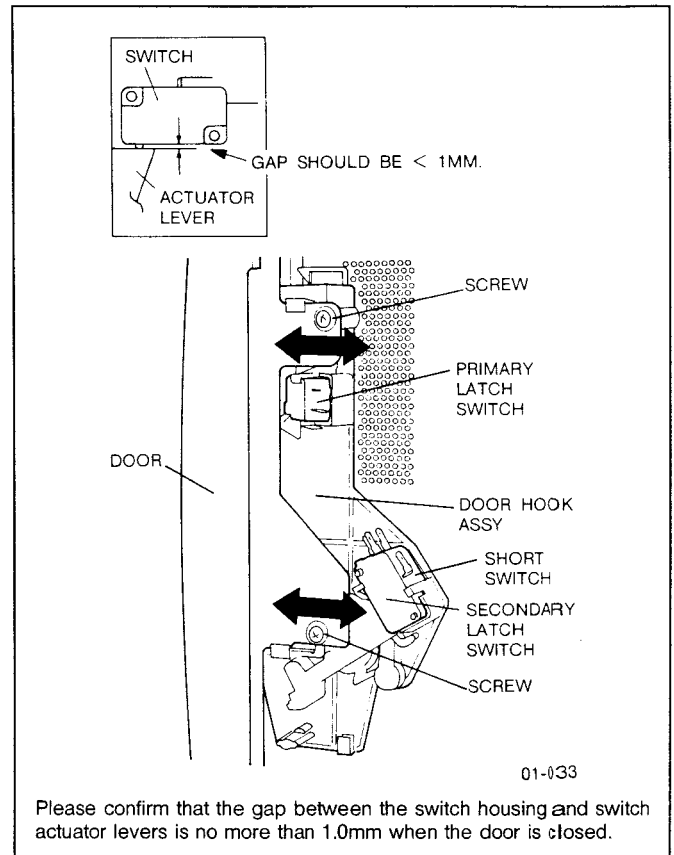


TABLE (1 l -1min. test)

RATED OUTPUT	TEMPERATURE RISE
700W	Min. 12.6°F (7.0°C)
800W	Min. 14.4°F (8.0°C)

PROCEDURE FOR MEASURING MICROWAVE ENERGY LEAKAGE

WARNING

Check for radiation leakage after every servicing. Should the leakage be more than 2 mW/cm² (1mW/cm² for Canada) inform the MSC, PSC, or MELCA immediately. After repairing or replacing any radiation safety device, keep a written record for future reference, as required by D.H.H.S and NHW regulation. This required must be strictly observed. In addition, the leakage reading must be recorded on the service repair ticket while in the customer's home.

NOTE: The U.S. government standard is 5 mW/cm² while in the customer's home. 2mW/cm² stated here is our own voluntary standard. (1mW/cm² for Canada)

1. Equipment

- *Electromagnetic radiation monitor
- *Glass thermometer 212°F or 100°C
- *600cc glass beaker

2. Procedure for measuring radiation leakage.

Note before measuring

- (1) Do not exceed meter full scale deflection. Leakage monitor should initially be set to the highest scale.
 - (2) To prevent false readings the test probe should be held by the grip portion of the handle only and moved along the shaded area shown in Figure no faster than 1 inch/sec (2.5 cm/sec)
 - (3) Leakage with the outer panel removed.....less than 5mW/cm²
 - (4) Leakage for a fully assembled oven with door normally closed.....less than 2mW/cm² (1mW/cm² for Canada)
 - (5) Leakage for a fully assembled oven [Before the latch switch (primary) is interrupted] while pulling the door less than 2mW/cm²
- (A) Pour 275 ± 15cc (9ozs ± 1/2oz) of 20 ± 5°C (68 ± 9°F) water in a beaker which is graduated to 600cc, and place the beaker in the center of the oven.
- (B) Set the radiation monitor to 2450MHz and use it following the manufacturer's recommended test procedure to assure correct results.
- (C) When measuring the leakage, always use the 2 inch (5cm) spacer supplied with the probe.
- (D) Tap the start pad or set the timer and with the magnetron oscillating, measure the leakage by holding the probe perpendicular to the surface being measured.
- (1) **Measurement with the outer panel removed.**
Whenever you replace the magnetron, measure for radiation leakage before the outer panel is installed and after all necessary components are replaced or adjusted. Special care should be taken in measuring around the magnetron.

WARNING

Avoid contacting any high voltage parts.

(2) Measurements with a fully assembled oven.

After all components, including the outer panel are fully assembled, measure for radiation leakage around the door periphery, the door viewing window, the exhaust opening and air inlet openings.

3. Record keeping and notification after measurement

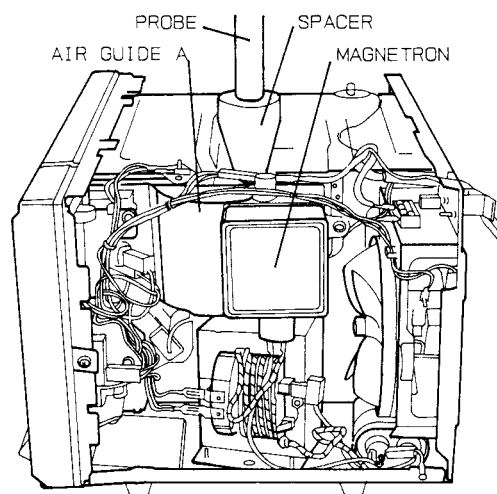
- (A) After any adjustment or repair to a microwave oven, a leakage reading must be taken. Record this leakage reading on the repair ticket even if it is zero.
A copy of this repair ticket and the microwave leakage reading should be kept by repair facility.

- (B) Should the radiation leakage be more than 2 mW/cm² (1mW/cm² for Canada) after determining that all parts are in good condition, functioning properly, and genuine replacement parts as listed in this manual have been used, immediately notify the MSC, PSC or MELCA.

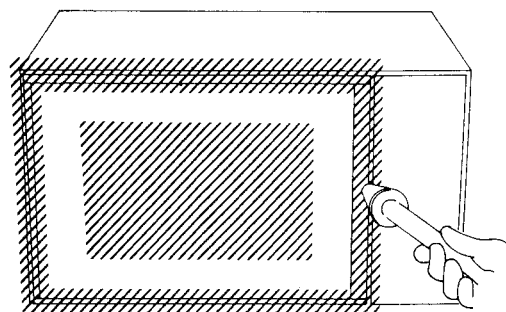
4. At least once a year, have the radiation monitor checked for calibration by its manufacturer.

WARNING

AVOID CONTACTING ANY HIGH VOLTAGE PARTS.



01-034



01-035

MOVE PROBE ALONG SHADED AREA (////) AROUND EXHAUST OPENINGS (as shown) AND AROUND AIR INLET OPENING

TROUBLESHOOTING GUIDE

CAUTION

1. Check grounding before checking for trouble.
2. Be careful of the high voltage circuit.
3. Discharge high voltage capacitor.
4. When checking the continuity of the switches or the high voltage transformer, disconnect one lead wire from these parts and then check continuity with the AC plug removed. To do otherwise may result in a false reading or damage to your meter.
When disconnecting a plastic connector from a terminal, you must hold the plastic connector instead of the lead wire and then disconnect it, otherwise lead wire may be open or the connector cannot be removed.
5. Do not touch any parts of the circuitry on the digital programmer circuit, since static electric discharge may damage this control panel.
Always touch yourself to ground while working on this panel to discharge any static charge in your body.
6. A 120V AC is present at the shaded area  of the digital programmer circuit (Terminals of power relay B and primary circuit of low voltage transformer). When troubleshooting, be cautious of possible electrical shock hazard.

First of all operate the microwave oven following the correct operating procedures in order to find the exact cause of any trouble.

[TROUBLE 1] Oven does not start cooking

SYMPTOM	STEP	CHECK	RESULT	CAUSE/CORRECTIONS
Oven is dead. No display at all	1	Fuse	Blown	→ TROUBLE 2
			Normal	→ STEP 2
	2	Thermal cutout	Faulty (open)	Thermal cutout ※ Check fan motor when thermal cutout is defective
			Normal	→ TROUBLE 4
Display lit but timer not starts count down	1	Secondary latch switch (Door closed 0 Ω Door opened ∞ Ω)	Faulty	Secondary latch switch
			Normal	→ TROUBLE 4
Timer starts count down but no microwave oscillation	1	Primary latch switch (Door closed 0 Ω Door opened ∞ Ω)	Faulty	Primary latch switch
			Normal	→ STEP 2
	2	High voltage transformer primary voltage	No voltage applied	→ STEP 3
			Power supply voltage applied	→ STEP 4
	3	Is 18 (12)V DC applied to power relay B?	No voltage applied	→ TROUBLE 4
			Voltage applied	Power relay B
	4	Check high voltage component according to component test procedure H.V. Transformer H.V. Capacitor H.V. Diode Magnetron	Faulty	Replace faulty H.V. Component

[TROUBLE 2] Fuse is blown

SYMPTOM	STEP	CHECK	RESULT	CAUSE/CORRECTIONS
Main fuse blown	1	Primary latch switch (Door closed 0 Ω Door opened ∞ Ω) and also power relay B (RY 2), when power relay B is located within monitor circuit.	Abnormal	Primary latch switch (※NOTE)
			Normal	→ STEP 2
	2	Short switch (Door closed 0 Ω Door opened ∞ Ω)	Abnormal	Short switch (※NOTE)
			Normal	→ STEP 3
	3	H.V.Capacitor	Faulty	H.V.Capacitor
			Normal	→ STEP 4
	4	H.V.Diode	Faulty	H.V.Diode
			Normal	→ STEP 5
	5	Magnetron	Faulty	Magnetron
			Normal	H.V. Transformer
	※NOTE: All these switches must be replaced at same time. (Refer to adjustment instructions.) Check continuity of power relay B's contacts (between 1 and 2) and if it has continuity, replace power relay B too.			

[TROUBLE 3] Other troubles

CONDITIONS	POSSIBLE CAUSE	NOTE
Microwave output power is low. First of all, check if output power is really low by following "Measurement of microwave output".	1. Decrease in power source voltage. 2. Aging change of magnetron.	
Oven lamp and fan motor turn on when door is open.	1. Shorted contacts of Primary latch switch.	For U.S.A. models only.
Oven lamp and fan motor turn on when power supply cord is plugged into wall receptacle.	1. Open Secondary latch switch. 2. Shorted contacts of power relay A. (RY2) 3. Defective digital programmer circuit. (See trouble 4)	
Microwave oven does not operate normally, when auto sensor cooking is selected.	1. Defective steam sensor. 2. Defective DPC. (See trouble 4)	
"88:88" appears in display window after 10 seconds elapsed in the auto sensor cooking mode.	1. Open or loose wiring of sensor terminals from DPC. 2. Open steam sensor. 3. Defective DPC. (See trouble 4)	
Microwave oven does not operate and "88:88" appears in display.	1. Defective temp sensor. 2. Open grounding circuit. (NOTE) 3. Defective DPC.	Check tighten screws on escutcheon base bracket, D.P.C. board and temp sensor.

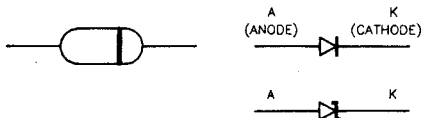
(TROUBLE 4) Trouble related to Digital programmer circuit for LCD display models

SYMPTOM	STEP	CHECK	RESULT	CAUSE/CORRECTIONS
No display when oven is first plugged in.	1	Low voltage transformer (LVT) secondary voltage	Abnormal 0V	LVT
			Normal	→ Step 2
	2	IC-1 pin 37 voltage	Abnormal	ZD1,Q1
			Normal = 5V	→ Step 3
	3	IC-1 pin 23 voltage	Abnormal	IC-2
			Normal	→ Step 4
4	IC-1 pin 29,30,31 voltage	Abnormal	R15,R16,R17	
		Normal 3V,2V,1V	IC-1,CX1,LCD	
No key input	1	Membrane switch continuity	Abnormal	Membrane switch
			Normal	IC-1
No beep sound	1	IC-1 pin 26 waveform	Abnormal	IC-1
			Normal	→ Step 2
	2	Q3 transistor	Abnormal	Q3
			Normal	BZ1
Power relay A does not turn on even though the program has been set and the start pad is tapped.	1	IC-1 pin 16 voltage at operation	Abnormal	IC-1
			Normal 0V	→ Step 2
	2	Short circuit between pin 1 and 12 of IC-2	Still not turn on	RY-2
			Turns on now	IC-2, Q4
No microwave oscillation at any power setting	1	IC-1 pin 14 and 15 voltages	Abnormal	IC-1
			Normal 14---1.7V 15---0V	Q2
Dark or unclear display	1	Replace LCD and check operation	Normal	LCD
			Abnormal	IC-1
Missing or lighting of unnecessary segment	1	Replace IC-1 and check operation	Normal	IC-1
			Abnormal	LCD
For Fluorescent tube models				
No Display when oven is first plugged in	1	Low voltage transformer (LVT) secondary voltage	Abnormal 0V	LVT
			Normal	→ Step 2
	2	IC-1 pin 34 voltage (Emitter of Q1)	Abnormal	ZD1,Q1
			Normal = 5V	→ Step 3
	3	IC-1 pin 36 voltage (14 pin of IC-2)	Abnormal	IC-2
Normal			→ IC-1, CX1, DISPLAY	
No key input	1	Membrane switch continuity	Abnormal	Membrane switch
			Normal	IC-1

SYMPTOM	STEP	CHECK	RESULT	CAUSE/CORRECTIONS
No beep sound	1	IC-1 pin 25 voltage	Abnormal	IC-1
			Normal	BZ
Power relay A(RY-2) does not turn on even though the program has been set and the start pad is tapped	1	IC-1 pin 3 voltage while operation	Abnormal	IC-1
			Normal = 5V	→ Step 2
	2	short circuit between pin 1 and pin 12 of IC-2	Still not turn on	RY-2
			RY-2 turns on	IC-2
No microwave oscillation at any power setting	1	IC-1 pin 6 and pin 14 voltages while operation at high power	Abnormal	IC-1
			Normal 6---5V, 14---5V	→ Step 2
	2	Q4 transistor	Abnormal	Q4
			Normal	IC-2, RY-1
Dark or unclear display	1	Replace display and check operation	Normal	DISPLAY
			Abnormal	IC-1
Missing or lighting of unnecessary segment	1	Replace IC-1 and check operation	Normal	IC-1
			Abnormal	DISPLAY
TO BE CONTINUED FOR AUTO SENSOR MODELS				
Auto Sensor cooking does not operate normally. (Steam sensor does not detect steam from foods.)	1	Steam sensor terminal voltage by using high impedance tester (20kΩ/V), when breathe on metal surface of sensor	Abnormal = 0V	Steam sensor
			Normal ≥ 10~30mV	IC-1, IC-3

HOW TO CHECK THE SEMICONDUCTORS USING AN OHM METER

Diode



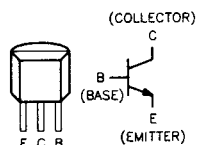
	FORWARD	REVERSE
A-K	SMALL	∞

Transistor

NPN Transistor

2SC.....

2SD.....

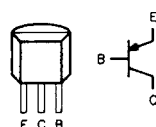


	FORWARD	REVERSE
B-E	SMALL	∞
B-C	SMALL	∞
C-E	∞	∞

PNP Transistor

2SA.....

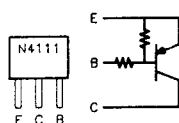
2SB.....



	FORWARD	REVERSE
E-B	SMALL	∞
C-B	SMALL	∞
C-E	∞	∞

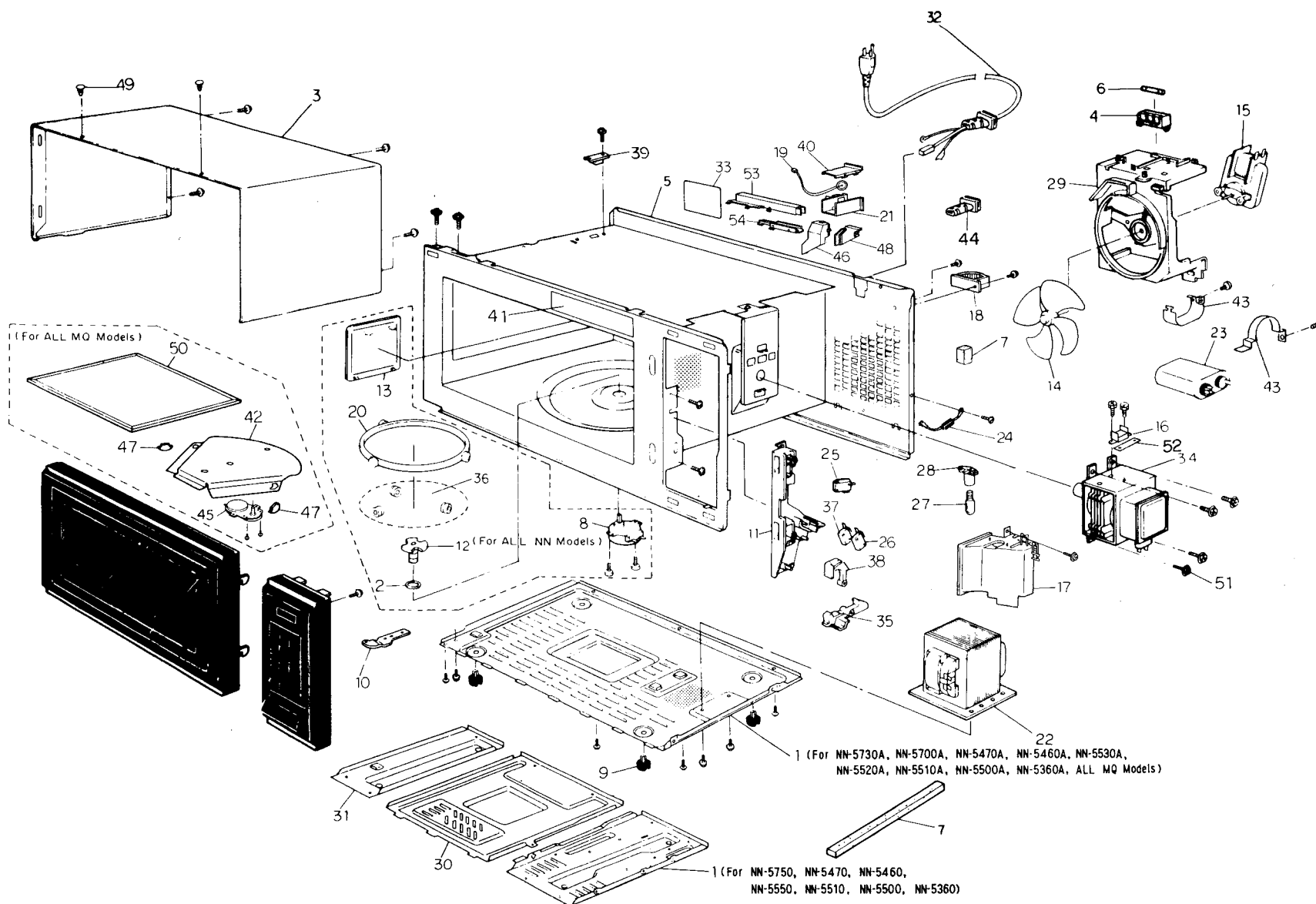
Digital Transistor

PNP Transistor



	FORWARD	REVERSE
E-B	10k Ω ~30k Ω	10k Ω ~100k Ω
C-B	50k Ω ~90k Ω	∞
C-E	40k Ω ~80k Ω	∞

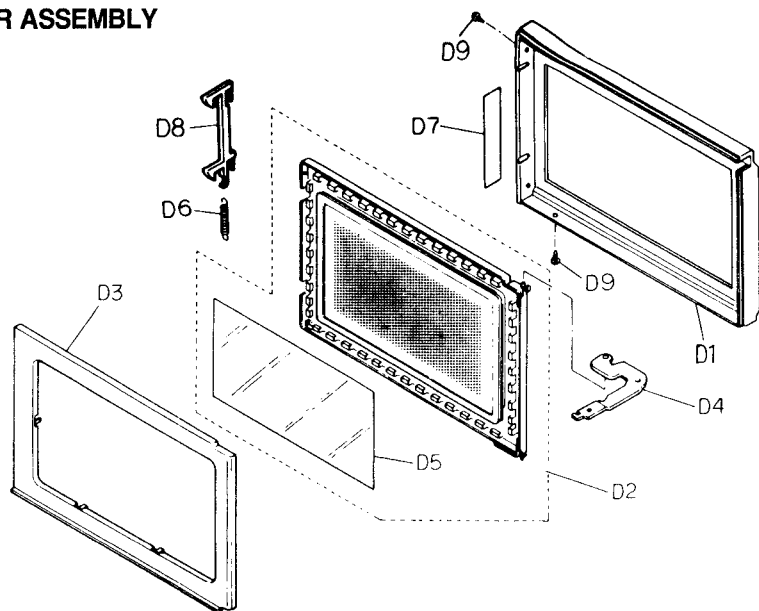
EXPLODED VIEW



EXPLODED VIEW AND PARTS LIST

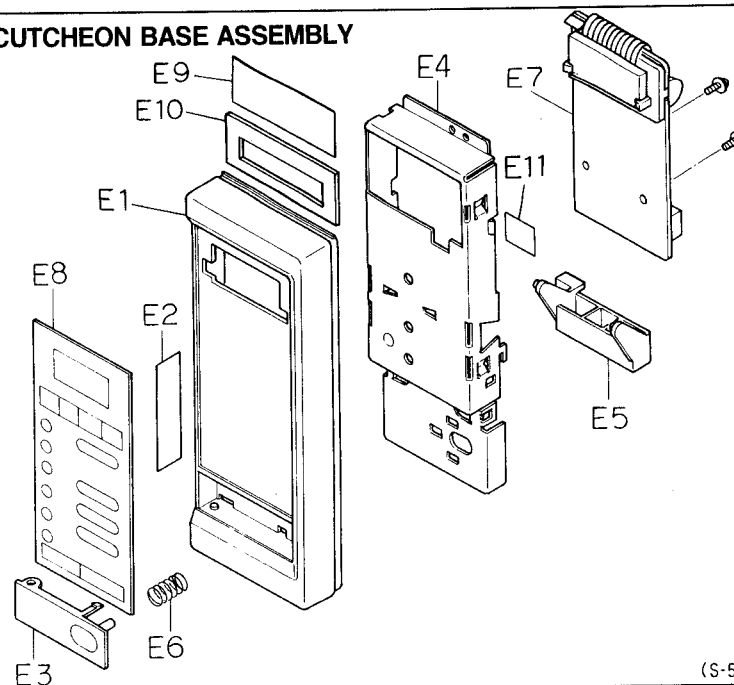
(S-567H etc)

DOOR ASSEMBLY



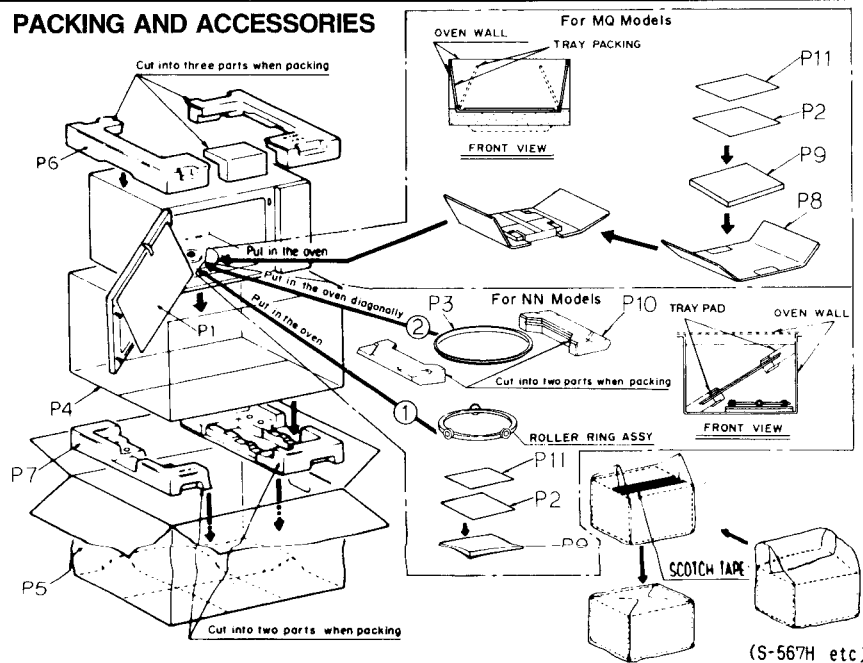
(S-567H etc)

ESCUTCHEON BASE ASSEMBLY



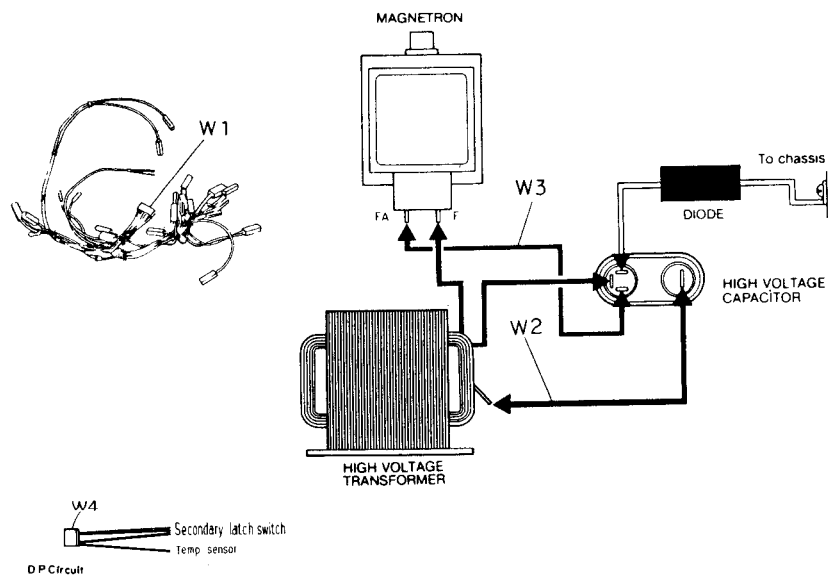
(S-567H etc)

PACKING AND ACCESSORIES



(S-567H etc)

WIRING MATERIAL



(S-567H etc)

PARTS LIST

NOTE 1: When ordering replacement part(s), please use part number(s) shown in this parts list.

Do not use description of the part.

2: Important safety notice:

Components identified by $\triangle$ mark have special characteristics important for safety.

When replacing any of these components, use only manufacturer's specified parts.

3: Items marked ※ are supplied by MCAC (U.S.A.).

Ref. No.	Part No.	Part Name & Description	Pcs/Set	Remarks	Ref. No.	Part No.	Part Name & Description	Pcs/Set	Remarks
1	A10015690AP	Base	1	NN-5750, NN-5700, NN-5470, NN-5460, NN-5550, NN-5510, NN-5500, NN-5360	※ 16	B61455290AP	Thermal cutout	1	NN-5500, NN-5360 For Magnetron NN-5730A, NN-5700A, NN-5470A, NN-5460A, NN-5530A, NN-5520A, NN-5510A, NN-5500A, NN-5360A, All MQ Models For Magnetron
※ 1	B10015690AP	Base	1	NN-5730A, NN-5700A, NN-5470A, NN-5460A, NN-5530A, NN-5520A, NN-5510A, NN-5500A, NN-5360A, All MQ Models	17	A40254660AP	Air guide A	1	
2	ANE2177-F80	Washer	1	All NN Models	18	A11404960AQ	Stopper A	1	NN-5750, NN-5700, NN-5470, NN-5460, NN-5550, NN-5510, NN-5500, NN-5360
3	A10095690HCP	Cabinet body	1	NN-5700, NN-5460	※ 18	B11404960AQ	Stopper A	1	NN-5730A, NN-5700A, NN-5470A, NN-5460A, NN-5530A, NN-5520A, NN-5510A, NN-5500A, NN-5360A, All MQ Models
※ 3	A10095690AP	Cabinet body	1	NN-5730A, NN-5700A, NN-5470A, NN-5460A, NN-5530A, NN-5520A, NN-5510A, NN-5500A, NN-5360A, MQS0808W, MQS0806W, MQS0804W, MQS0803W, MQS080W	19	A607S5500AP	Steam sensor	1	NN-5750, NN-5700, NN-5470, NN-5460, NN-5550, NN-5510, NN-5500, NN-5360
※ 3	B10095750HAQ	Cabinet body	1	MQS0808H, MQS0806HC, MQS0803H, MQS0803HC	20	A290D4830AP	Roller ring assy	1	NN-5750, NN-5700, NN-5470, NN-5460, NN-5550, NN-5510, NN-5500, NN-5360
4	A62314000AP	Fuse holder	1	NN-5750, NN-5700	21	A22135540AP	Sensor bracket A	1	NN-5730A, NN-5700A, NN-5470A, NN-5460A, NN-5530A, NN-5520A, NN-5510A, NN-5500A, NN-5360A, All MQ Models
5	A200A5690AP	Oven assy	1	NN-5470, NN-5460, NN-5550, NN-5510, NN-5500, NN-5360	22	A621C4650AP	H.V. Transformer	1	NN-5750, NN-5700, NN-5470, NN-5460, NN-5550, NN-5510, NN-5500, NN-5360
※ 5	A200A5750AP	Oven assy	1	NN-5730A, NN-5700A	※ 22	A600B5770AP	H.V. Transformer	1	NN-5730A, NN-700A, NN-5470A, NN-5460A, NN-530A, NN-5520A, NN-5510A, NN-5500A, NN-5360A, All MQ Models
※ 5	B200A5690AP	Oven	1	NN-5470A, NN-5460A, NN-5530A, NN-5520A, NN-5510A, NN-5500A, NN-5360A	23	A60904650AP	H.V. Capacitor	1	NN-5750, NN-5700, NN-5470, NN-5460, NN-5550, NN-5510, NN-5500, NN-5360
※ 5	B200A5690AQ	Oven	1	MQS0808H, MQS0806W, MQS0806HC, MQS0803H, MQS0804W, MQS0803W, MQS080W	23	ANE6090X00AP	H.V. Capacitor	1	NN-5730A, NN-700A, NN-5470A, NN-5460A, NN-530A, NN-5520A, NN-5510A, NN-5500A, NN-5360A, All MQ Models
※ 5	B200A5770AQ	Oven	1	MQS0806W, MQS0803H, MQS0804W, MQS0803W, MQS080W	24	A62024000AP	Diode	1	NN-5750, NN-5700, NN-5470, NN-5460, NN-5550, NN-5510, NN-5500, NN-5360
6	A62304650AP	Fuse	1	250V, 15A	24	ANE6202X00AP	Diode	1	NN-5730A, NN-700A, NN-5470A, NN-5460A, NN-530A, NN-5520A, NN-5510A, NN-5500A, NN-5360A, All MQ Models
7	ANE000Z000AA	Cushion rubber A	1	All NN Models	25	ANE61424L0AG	Micro switch	1	Primary latch swch (V-16G-3C26)
8	A63264080AP	Turntable motor	1	All NN Models AC, 3W, Single	26	A61424650AP	Micro switch	1	Secondary latch switch (L-3C2-MR)
9	ANE1008-3W0	Rubber foot	4	NN-5750, NN-5700, NN-5470, NN-5460, NN-5550, NN-5510, NN-5500, NN-5360	27	ANE6030540AP	Incandescent lamp	1	NN-5750, NN-5700, NN-5470, NN-5460, NN-5550, NN-5510, NN-5500, NN-5360
10	A30075540AP	Lower hinge	1	NN-5730A, NN-5700A, NN-5470A, NN-5460A, NN-5530A, NN-5520A, NN-5510A, NN-5500A, NN-5360A, All MQ Models	※ 27	B60304740AQ	Incandescent lamp	1	NN-5730A, NN-700A, NN-5470A, NN-5460A, NN-530A, NN-5520A, NN-5510A, NN-5500A, NN-5360A, All MQ Models
※ 10	B30075540AP	Lower hinge	1	NN-5730A, NN-5700A, NN-5470A, NN-5460A, NN-5530A, NN-5520A, NN-5510A, NN-5500A, NN-5360A, All MQ Models	28	A61524000AP	Oven lamp socket	1	NN-5750, NN-5700, NN-5470, NN-5460, NN-5550, NN-5510, NN-5500, NN-5360
11	A30204310AG	Door hook A	1	All NN Models					
12	A21315540AP	Pulley shaft	1	NN-5750, NN-5700, NN-5470, NN-5460, NN-5550, NN-5510, NN-5500, NN-5360					
13	A20554000AP	Cover A	1	NN-5730A, NN-5700A, NN-5470A, NN-5460A, NN-5530A, NN-5520A, NN-5510A, NN-5500A, NN-5360A					
※ 13	B20554000AP	Cover A	1	NN-5730A, NN-5700A, NN-5470A, NN-5460A, NN-5530A, NN-5520A, NN-5510A, NN-5500A, NN-5360A					
14	ANE40086W0AP	Fan	1	NN-5750, NN-5700, NN-5470, NN-5460, NN-5550, NN-5510, NN-5500, NN-5360					
15	A400A5180AP	Fan motor	1	AC, 27W, Single					
※ 15	A400A4010AP	Fan motor	1	NN-5730A, NN-5700A, NN-5470A, NN-5460A, NN-5530A, NN-5520A, NN-5510A, NN-5500A, NN-5360A, All MQ Models					
16	A61454650AP	Thermal cutout	1	AC, 24W, Single NN-5750, NN-5700, NN-5470, NN-5460, NN-5550, NN-5510,					

Ref. No.	Part No.	Part Name & Description	Pcs/Set	Remarks	Ref. No.	Part No.	Part Name & Description	Pcs/Set	Remarks
※ 28	B61524740AQ	Oven lamp socket	1	NN-5730A, NN-5700A, NN-5470A, NN-5460A, NN-5530A, NN-5520A, NN-5510A, NN-5500A, NN-5360A, All MQ Models	45	A61444650AQ	Antenna motor	1	NN-5510A, NN-5500A, NN-5360A All MQ Models All MQ Models AC, 2.5W, Single
29	A41445540AP	Orifice	1	NN-5750, NN-5700, NN-5470, NN-5460, NN-5550, NN-5510, NN-5500, NN-5360	46	A40265540AP	Air guide B	1	NN-5750, NN-5700, NN-5730A, NN-5700A, MQS0808H, MQS0808W, MQS0806HC, MQS0806W
※ 29	B41444060AP	Orifice	1	NN-5730A, NN-5700A, NN-5470A, NN-5460A, NN-5530A, NN-5520A, NN-5510A, NN-5500A, NN-5360A, All MQ Models	47	A20194210AQ	Antenna spacer	2	All MQ Models
30	A10265690AP	Base C	1	NN-5750, NN-5700, NN-5470, NN-5460, NN-5550, NN-5510, NN-5500, NN-5360	48	A40315540AP	Air guide C	1	NN-5750, NN-5700, NN-5730A, NN-5700A, MQS0808H, MQS0808W, MQS0806HC, MQS0806W
31	A11295690AP	Base B	1	NN-5750, NN-5700, NN-5470, NN-5460, NN-5550, NN-5510, NN-5500, NN-5360	49	ANE90822Q0AQ	Clip (White)	2	MQS0808H, MQS0808W, MQS0806HC, MQS0806W, MQS0803H, MQS0803HC
32	A900C5500CP	AC cord W/plug	1	NN-5750, NN-5470, NN-5550 125V	49	ANE90826W0AP	Clip (Brown)	2	MQS0808W, MQS0806W, MQS0804W, MQS0803W, MQS080W
32	A900C5540AQ	AC cord W/plug	1	NN-5700, NN-5460, NN-5510, NN-5500, NN-5360 125V	50	A010T5690AQ	Shelf	1	All MQ Models
※ 32	B900C4740AQ	AC cord W/plug	1	NN-5730A, NN-5700A, NN-5470A, NN-5460A, NN-5530A, NN-5520A, NN-5510A, NN-5500A, NN-5360A, MQS0808H, MQS0808W, MQS0806W, MQS0803H, MQS0804W, MQS0803W, MQS080W 125V	51	XTWANE4+10RU	Tapping screw 4×10	4	For Magnetron NN-5750, NN-5700, NN-5470, NN-5460, NN-5550, NN-5510, NN-5500, NN-5360
※ 32	B900C4740CQ	AC cord W/plug	1	MQS0806HC, MQS0803HC 125V	51	XTT4+8B	Tapping screw 4×8	4	For Magnetron NN-5730A, NN-5700A, NN-5470A, NN-5460A, NN-5530A, NN-5520A, NN-5510A, NN-5500A, NN-5360A, All MQ Models
33	A00064950CP	Warning label	1	NN-5750, NN-5470, NN-5550	52	A62384650AP	Spacer	1	NN-5750, NN-5700, NN-5730A, NN-5700A, MQS0808H, MQS0808W, MQS0806HC, MQS0806W
33	A00064950AP	Warning label	1	NN-5700, NN-5460, NN-5510, NN-5500, NN-5360	53	A64505540AP	Exhaust guide B	1	NN-5750, NN-5700, NN-5730A, NN-5700A, MQS0808H, MQS0808W, MQS0806HC, MQS0806W
※ 33	B00064000AP	Warning label	1	NN-5730A, NN-5700A, NN-5470A, NN-5460A, NN-5530A, NN-5520A, NN-5510A, NN-5500A, NN-5360A, MQS0808H, MQS0808W, MQS0806W, MQS0803H, MQS0804W, MQS0803W, MQS080W	54	A65435540AP	Exhaust guide C	1	NN-5750, NN-5700, NN-5730A, NN-5700A, MQS0808H, MQS0808W, MQS0806HC, MQS0806W
※ 33	B00064180CP	Warning label	1	MQS0806H, MQS0803HC		ANE0887L10AP	Cavity spray paint	1	Spray can, For repair of painted oven cavity
34	△ 2M210-M1C	Magnetron	1			ANE0887970AP	Touch-up paint	1	Bottle with brush, For repair of painted oven cavity
35	A31374650AP	Hook spacer B	1		DOOR ASSEMBLY				
36	A202K4650AP	Roller B assy	1	All NN Models NOTE 4	D1	△ A302A5690HCP	Door A assy	1	NN-5750 NOTE 5
37	△ ANE6178-5R0	Micro switch	1	Short switch (L-2C2-MR)	D1	△ A30015690AP	Door A	1	NN-5700 NOTE 5
38	A31384650AP	Hook spacer C	1		D1	△ A302A5750HCP	Door A assy	1	NN-5550 NOTE 5
39	△ A601L5180AP	Temp sensor	1	(Thermal protector)	D1	△ A30015750AP	Door A	1	NN-5470, NN-5460, NN-5510, NN-5500, NN-5360 NOTE 5
40	A22145540AP	Sensor bracket B	1	NN-5750, NN-5700, NN-5730A, NN-5700A, MQS0808H, MQS0808W, MQS0806HC, MQS0806W	※ D1	△ B30015690AP	Door A	1	NN-5730A, NN-5700A NOTE 5
41	A03345500AP	Menu label	1	NN-5750, NN-5730A, NN-5700A, NN-5550, NN-5530A, NN-5500A, NN-5520A	※ D1	△ B30015750AP	Door A	1	NN-5470A, NN-5460A, NN-5530A, NN-5520A, NN-5510A, NN-5500A, NN-5360A NOTE 5
41	A03345520AP	Menu label	1	NN-5520A	D1	△ A302A5670HAQ	Door A assy	1	MQS0808H NOTE 5
41	A03345610AP	Menu label	1	NN-5510, NN-5510A	D1	△ A302A5690HCQ	Door A assy	1	MQS0806HC, MQS0806W, MQS0803H, MQS0803HC, MQS0803W
41	A03345620AP	Menu label	1	MQS0808H, MQS0808W					
41	A03345500AQ	Menu label	1	MQS0806HC, MQS0806W					
41	A03345570AQ	Menu label	1	MQS0803H, MQS0803HC, MQS0803W					
41	A03345520AQ	Menu label	1	MQS0804W					
41	A03345620AQ	Menu label	1	All MQ Models	D1	△ A302A5670AQ	Door A assy	1	MQS0808W NOTE 5
※ 42	B202K5690AQ	Moving antenna	1	NN-5750, NN-5700, NN-5470, NN-5460, NN-5550, NN-5510, NN-5500, NN-5360	※ D1	△ B30015690AQ	Door A	1	MQS0806W, MQS0804W, MQS0803W, MQS080W NOTE 5
43	A60374740AP	Capacitor bracket	1	NN-5730A, NN-5700A, NN-5470A, NN-5460A, NN-5530A, NN-5520A, NN-5510A, NN-5500A, NN-5360A, All MQ Models	D2	△ A302K5690HCP	Door E assy	1	NN-5750, NN-5500, MQS0808H, MQS0806HC, MQS0803H, MQS0803HC
43	A61884060AP	Capacitor bracket	1	NN-5730A, NN-5700A, NN-5470A, NN-5460A, NN-5530A, NN-5520A, NN-5510A, NN-5500A, NN-5360A, All MQ Models	D2	△ A302K5690AP	Door E assy	1	NN-5730A, NN-5700A, NN-5470A, NN-5460A, NN-5530A, NN-5520A, NN-5510A, NN-5500A, NN-5360A
※ 44	B90274170AP	Cord bushing	1	NN-5730A, NN-5700A, NN-5470A, NN-5460A, NN-5530A, NN-5520A,					

Ref. No.		Part No.	Part Name & Description	Pcs/Set	Remarks	Ref. No.		Part No.	Part Name & Description	Pcs/Set	Remarks
D3	△	A30855690HCP	Door C	1	NN-5510, NN-5510A, NN-5500, NN-5500A, NN-5360, NN-5360A, MQS0808W, MQS0806W, MQS0804W, MQS0803W, MQS080W	※ E2		B00075770AP	Name plate	1	NN-5360A
D3	△	A30855690AP	Door C	1	NN-5750, NN-5550, MQS0808H, MQS0806HC, MQS0803H, MQS0803HC	※ E2		B00075670HAQ	Name plate	1	MQS0808H
					NN-5730A, NN-5700, NN-5700A, NN-5470A, NN-5470, NN-5460, NN-5460A, NN-5530A, NN-5520A, NN-5510, NN-5510A, NN-5500, NN-5500A, NN-5360, NN-5360A, MQS0808W, MQS0806W, MQS0804W, MQS0803W, MQS080W	※ E2		B00075670AQ	Name plate	1	MQS0808W
						※ E2		B00075690AQ	Name plate	1	MQS0806W
						※ E2		B00075750HAQ	Name plate	1	MQS0803H
						※ E2		B00075740AQ	Name plate	1	MQS0804W
						※ E2		B00075750AQ	Name plate	1	MQS0803W
						※ E2		B00075770AQ	Name plate	1	MQS080W
						E3		A80725540HCP	Door opening button	1	NN-5750, NN-5550
						E3		A80725540AP	Door opening button	1	NN-5730A, NN-5700, NN-5700A, NN-5470A, NN-5470, NN-5460, NN-5460A, NN-5530A, NN-5520A, NN-5510, NN-5510A, NN-5500, NN-5500A, NN-5360, NN-5360A, MQS0808H, MQS0806HC, MQS0803H, MQS0803HC
D4	△	A300B5540AP	Upper hinge	1		E3		A80725540HAQ	Door opening button	1	MQS0808W, MQS0806W, MQS0804W, MQS0803W, MQS080W
D5	△	A31455690AP	Door screen A	1		E3		A80725540AQ	Door opening button	1	MQS0808W, MQS0806W, MQS0804W, MQS0803W, MQS080W
D6		A30214000AP	Door key spring	1		E4		A81275540AP	Bracket	1	NN-5750, NN-5700, NN-5470, NN-5460, NN-5550, NN-5510, NN-5500, NN-5360
D7		ANE0245X00AP	DHHS label	1	NN-5700, NN-5460, NN-5510, NN-5500, NN-5360	E4		A81275690AP	Bracket	1	NN-5730A, NN-5700A, NN-5470A, NN-5460A, NN-5530A, NN-5520A, NN-5510A, NN-5500A, NN-5360A, All MQ Models
※ D7		B02454180AP	DHHS label	1	NN-5730A, NN-5700A, NN-5470A, NN-5460A, NN-5530A, NN-5520A, NN-5510A, NN-5500A, NN-5360A, MQS0808H, MQS0808W, MQS0806W, MQS0803H, MQS0804W, MQS0803W, MQS080W	E5		A82565540AP	Door opening lever	1	
D7		A04115020CQ	CSA caution label	1	NN-5750, NN-5550	E6		ANE80378A0AG	Spring	1	
※ D7		B04114180CP	CSA caution label	1	MQS0808H, MQS0806HC, MQS0803HC	E7		A603L5670AP	D.P.Circuit assy	1	NN-5750, NN-5730A, NN-5700, NN-5700A (W/Component)
D8		A30184650AP	Door key A	1		E7		A603L5700AP	D.P.Circuit assy	1	NN-5470A, NN-5470, NN-5460, NN-5460A (W/Component)
D9		XTBANE3+8BC	Tapping screw 3×8	2	NN-5750, NN-5550, MQS0808H, MQS0806HC, MQS0803H, MQS0803HC	E7		A603L5750AP	D.P.Circuit assy	1	NN-5550, NN-5530A, NN-5520A, NN-5510, NN-5510A, NN-5500, NN-5500A, MQS0804W (W/Component)
D9		XTBANE3+8BZ	Tapping screw 3×8	2	NN-5730A, NN-5700, NN-5700A, NN-5470A, NN-5470, NN-5460, NN-5460A, NN-5530A, NN-5520A, NN-5510, NN-5510A, NN-5500, NN-5500A, NN-5360, NN-5360A, MQS0808H, MQS0806W, MQS0804W, MQS0803W, MQS080W	E7		A603L5770AP	D.P.Circuit assy	1	NN-5360, NN-530A (W/Component)
ESCUTCHEON BASE ASSEMBLY						E7		A603L5670AQ	D.P.Circuit assy	1	MQS0808H, MQS0806W, MQS0803H, MQS0803HC, MQS0803W (W/Component)
E1		A80345540HCP	Escutcheon base	1	NN-5750, NN-5550 NOTE 6	E7		A603L5770AQ	D.P.Circuit assy	1	MQS080W (W/Component)
E1		A80345540AP	Escutcheon base	1	NN-5730A, NN-5700, NN-5700A, NN-5470A, NN-5470, NN-5460, NN-5460A, NN-5530A, NN-5520A, NN-5510, NN-5510A, NN-5500, NN-5500A, NN-5360, NN-5360A NOTE 6	E8		A64795570HCP	Membrane switch	1	NN-5750
					MQS0808H, MQS0806HC, MQS0803H, MQS0803HC NOTE 6	E8		A64795560AP	Membrane switch	1	NN-5730A
					MQS0808W, MQS0806W, MQS0804W, MQS0803W, MQS080W NOTE 6	E8		A64795570AP	Membrane switch	1	NN-5700, NN-5700A
E1		A80345540HAQ	Escutcheon base	1		E8		A64795580AP	Membrane switch	1	NN-5470, NN-5470A
E1		A80345540AQ	Escutcheon base	1		E8		A64795590AP	Membrane switch	1	NN-5460, NN-5460A
※ E2		B00075680AP	Name plate	1	NN-5730A	E8		A64795630HCP	Membrane switch	1	NN-5550
※ E2		A00075690AP	Name plate	1	NN-5700	E8		A64795600AP	Membrane switch	1	NN-5530A
※ E2		B00075690AP	Name plate	1	NN-5700A	E8		A64795610AP	Membrane switch	1	NN-5520A
※ E2		B00075700AP	Name plate	1	NN-5470A	E8		A64795620AP	Membrane switch	1	NN-5510, NN-5510A
※ E2		A00075710AP	Name plate	1	NN-5460	E8		A64795630AP	Membrane switch	1	NN-5500, NN-5500A
※ E2		B00075710AP	Name plate	1	NN-5460A	E8		A64795650AP	Membrane switch	1	NN-5360, NN-5360A
※ E2		B00075720AP	Name plate	1	NN-5530A	E8		A64795540HAQ	Membrane switch	1	MQS0808H
※ E2		B00075730AP	Name plate	1	NN-5520A	E8		A64795540AQ	Membrane switch	1	MQS0808W
※ E2		A00075740AP	Name plate	1	NN-5510	E8		A64795570HCQ	Membrane switch	1	MQS0806HC
※ E2		B00075740AP	Name plate	1	NN-5510A	E8		A64795570AQ	Membrane switch	1	MQS0806W (W/Component)
※ E2		A00075750AP	Name plate	1	NN-5500	E8		A64795630HAQ	Membrane switch	1	MQS0803H, MQS0803HC
※ E2		B00075750AP	Name plate	1	NN-5500A	E8		A64795620AQ	Membrane switch	1	MQS0804W
※ E2		A00075770AP	Name plate	1	NN-5360	E8		A64795630AQ	Membrane switch	1	MQS0803W
※ E2						E9		A64795650AQ	Membrane switch	1	MQS080W
								A80025540AP	Display filter	1	NN-5750, NN-5730A, NN-5700, NN-5700A, NN-5470A, NN-5470, NN-5460, NN-5460A, NN-5550, NN-5530A, NN-5520A, NN-5510, NN-5510A, NN-5500, NN-5500A, MQS0808H, MQS0806W, MQS0803H, MQS0803HC, MQS0804W, MQS0803W
						E10		A83425500AP	Cushion rubber B	1	NN-5360, NN-5360A, MQS080W

Ref. No.	Part No.	Part Name & Description	Pcs/Set	Remarks
E11	A60705500AP	Insulation sheet A	1	NN-5750, NN-5730A, NN-5700, NN-5700A, NN-5470, NN-5470A, NN-5460, NN-5460A, NN-5550, NN-5530A, NN-5520, NN-5520A, NN-5510, NN-5510A, NN-5500, NN-5500A, NN-5360 MQS0808H, MQS0808W, MQS0806HC, MQS0806W, MQS0803H, MQS0803HC, MQS0804W, MQS0803W
PACKING AND ACCESSORIES				
P1	ANE01072Q0AP	Door sheet	1	NN-5750, NN-5700, NN-5470, NN-5460, NN-5550, NN-5510, NN-5500, NN-5360
※ P1	B01075640AP	Door sheet	1	NN-5730A, NN-5700A, NN-5470A, NN-5460A, NN-5530A, NN-5520A, NN-5510A, NN-5500A, NN-5360A, All MQ Models
P2	A00035540CP	Instruction book	1	NN-5750
P2	A00035220CP	Instruction book	1	NN-5470, NN-5550
P2	A00035500AP	Instruction book	1	NN-5730A, NN-5700, NN-5700A
P2	A00035650AP	Instruction book	1	NN-5470A, NN-5460, NN-5460A, NN-5360, NN-5360A
P2	A00035520AP	Instruction book	1	NN-5530A, NN-5520A, NN-5510, NN-5510A, NN-5500, NN-5500A
P2	A00035500AQ	Instruction book	1	MQS0808H, MQS0808W, MQS0806W
P2	A00035500CQ	Instruction book	1	MQS0806HC
P2	A00035520AQ	Instruction book	1	MQS0803H, MQS0804W, MQS0803W
P2	A00035630CQ	Instruction book	1	MQS0803HC
P2	A00035650AQ	Instruction book	1	MQS080W
P3	A06015690AP	Glass cooking tray	1	All NN Models
P4	A01065300AP	Vinyl cover	1	NN-5750, NN-5700, NN-5470, NN-5460, NN-5550, NN-5510, NN-5500, NN-5360
※ P4	B01065640AP	Vinyl cover	1	NN-5730A, NN-5700A, NN-5470A, NN-5460A, NN-5530A, NN-5520A, NN-5510A, NN-5500A, NN-5360A, All MQ Models
P5	A01025690HCP	Packing case, paper	1	NN-5750
P5	A01025690AP	Packing case, paper	1	NN-5700
P5	A01025710AP	Packing case, paper	1	NN-5460
P5	A01025740AP	Packing case, paper	1	NN-5510
P5	A01025750AP	Packing case, paper	1	NN-5500
P5	A01025770AP	Packing case, paper	1	NN-5360
P5	A01025700CP	Packing case, paper	1	NN-5470
P5	A01025750HCP	Packing case, paper	1	NN-5550
※ P5	B01025690AP	Packing case, paper	1	NN-5730A, NN-5700A
※ P5	B01025750AP	Packing case, paper	1	NN-5470A, NN-5460A, NN-5530A, NN-5520A, NN-5510A, NN-5500A
※ P5	B01025770AP	Packing case, paper	1	NN-5360A
※ P5	B01025690AQ	Packing case, paper	1	MQS0808H, MQS0808W, MQS0806W
※ P5	B01025750AQ	Packing case, paper	1	MQS0803H, MQS0804W, MQS0803W
※ P5	B01025770AQ	Packing case, paper	1	MQS080W
※ P5	B01025690CQ	Packing case, paper	1	MQS0806HC
※ P5	B01025670CQ	Packing case, paper	1	MQS0803HC
P6	A01045700CP	Upper filler	1	NN-5750, NN-5700, NN-5470, NN-5460, NN-5550, NN-5510, NN-5500, NN-5360
※ P6	B01045690AP	Upper filler	1	NN-5730A, NN-5700A, NN-5470A, NN-5460A, NN-5530A, NN-5520A, NN-5510A, NN-5500A, NN-5360A, All MQ Models
P7	A01054130AP	Lower filler	1	NN-5460, NN-5700, NN-5510, NN-5500, NN-5360

Ref. No.	Part No.	Part Name & Description	Pcs/Set	Remarks
P7	A01055700CP	Lower filler	1	NN-5750, NN-5470, NN-5550
※ P7	B01055690AP	Lower filler	1	NN-5730A, NN-5700A, NN-5470A, NN-5460A, NN-5530A, NN-5520A, NN-5510A, NN-5500A, NN-5360A, All MQ Models
※ P8	B01085690AP	Tray packing	1	NN-5730A, NN-5700A, NN-5470A, NN-5460A, NN-5530A, NN-5520A, NN-5510A, NN-5500A, NN-5360A
P9	A000B5540CP	Cook book	1	NN-5750, NN-5470, NN-5550
P9	A000B5540CQ	Cook book	1	MQS0806HC, MQS0803HC
P10	A01134830AP	Tray pad	1	NN-5750, NN-5700, NN-5470, NN-5460, NN-5550, NN-5510, NN-5500, NN-5360
P11	ANE0169B60CP	Servicenter list	1	NN-5750, NN-5470, NN-5550
WIRING MATERIAL				
W1	A030A5690CP	Lead wire harness	1	NN-5750, NN-5470, NN-5550
W1	A030A5690AP	Lead wire harness	1	NN-5700, NN-5460, NN-5510, NN-5500, NN-5360
※ W1	B030A5540AP	Lead wire harness	1	NN-5730A, NN-5700A, NN-5470A, NN-5460A, NN-5530A, NN-5520A, NN-5510A, NN-5500A, NN-5360A, MQS0808H, MQS0808W, MQS0806W, MQS0803H, MQS0804W, MQS0803W, MQS080W
※ W1	B030A5500CQ	Lead wire harness	1	MQS0806HC, MQS0803HC
W2	A03504000AP	Lead wire	1	NN-5750, NN-5700, NN-5470, NN-5460, NN-5550, NN-5510, NN-5500, NN-5360
※ W2	B03514830AP	Lead wire	1	NN-5730A, NN-5700A, NN-5470A, NN-5460A, NN-5530A, NN-5520A, NN-5510A, NN-5500A, NN-5360A, All MQ Models
W3	A03514000AP	Lead wire	1	NN-5750, NN-5700, NN-5470, NN-5460, NN-5550, NN-5510, NN-5500, NN-5360
※ W3	B03505690AP	Lead wire	1	NN-5730A, NN-5700A, NN-5470A, NN-5460A, NN-5530A, NN-5520A, NN-5510A, NN-5500A, NN-5360A, All MQ Models
W4	A03535320AP	Lead wire	1	NOTE 7 NN-5750, NN-5700, NN-5470, NN-5460, NN-5550, NN-5510, NN-5500, NN-5360
※ W4	B03535300AP	Lead wire	1	NN-5730A, NN-5700A, NN-5470A, NN-5460A, NN-5530A, NN-5520A, NN-5510A, NN-5500A, MQS0808H, MQS0808W, MQS0806HC, MQS0806W, MQS0803H, MQS0803HC, MQS0804W, MQS0803W, NN-5360A, MQS080W
※ W4	B03535320AP	Lead wire	1	

NOTE 4: When ordering the roller B assy, three rollers will be shipped. When replacing the roller B, three rollers should be replaced at the same time.

Otherwise the glass cooking tray may not turn smoothly.

5: Please order DHHS label or CSA caution label together.

6: Please order name plate together.

7: When this lead wire is open, replace together with magnetron.

NN-7360, NN-6360, NN-5360A
MQS110W, MQS080W

STABILIZED POWER SUPPLY CIRCUIT

DISPLAY POWER SUPPLY CIRCUIT

PULSE GENERATION CIRCUIT

BUZZER CIRCUIT

IC-1 Pin No.	IC-1 Symbol No.	Waveform
29	VLC 3	3V
30	VLC 2	2V
31	VLC 1	1V
22	XIN	5.5V, 0V, 4.5V, 0.5V, 0.4μs
21	XOUT	4.5V, 0.5V, 0.4μs
27	INT	5V, 0V, 16.7ms
33	COM 0	3V, 2V, 1V, 0V, 0.8ms, 4.8ms
34	COM 1	3V, 2V, 1V, 0V, 0.8ms, 4.8ms
35	COM 2	3V, 2V, 1V, 0V, 0.8ms, 4.8ms
46, 49, 52, 55	SEG 0, 3, 6, 9	3V, 2V, 1V, 0V, 0.8ms, 4.8ms
47, 48, 50, 51, 53, 54, 57, 58	SEG 1, 2, 4, 5, 7, 8, 10, 11	3V, 2V, 1V, 0V, 0.8ms, 4.8ms

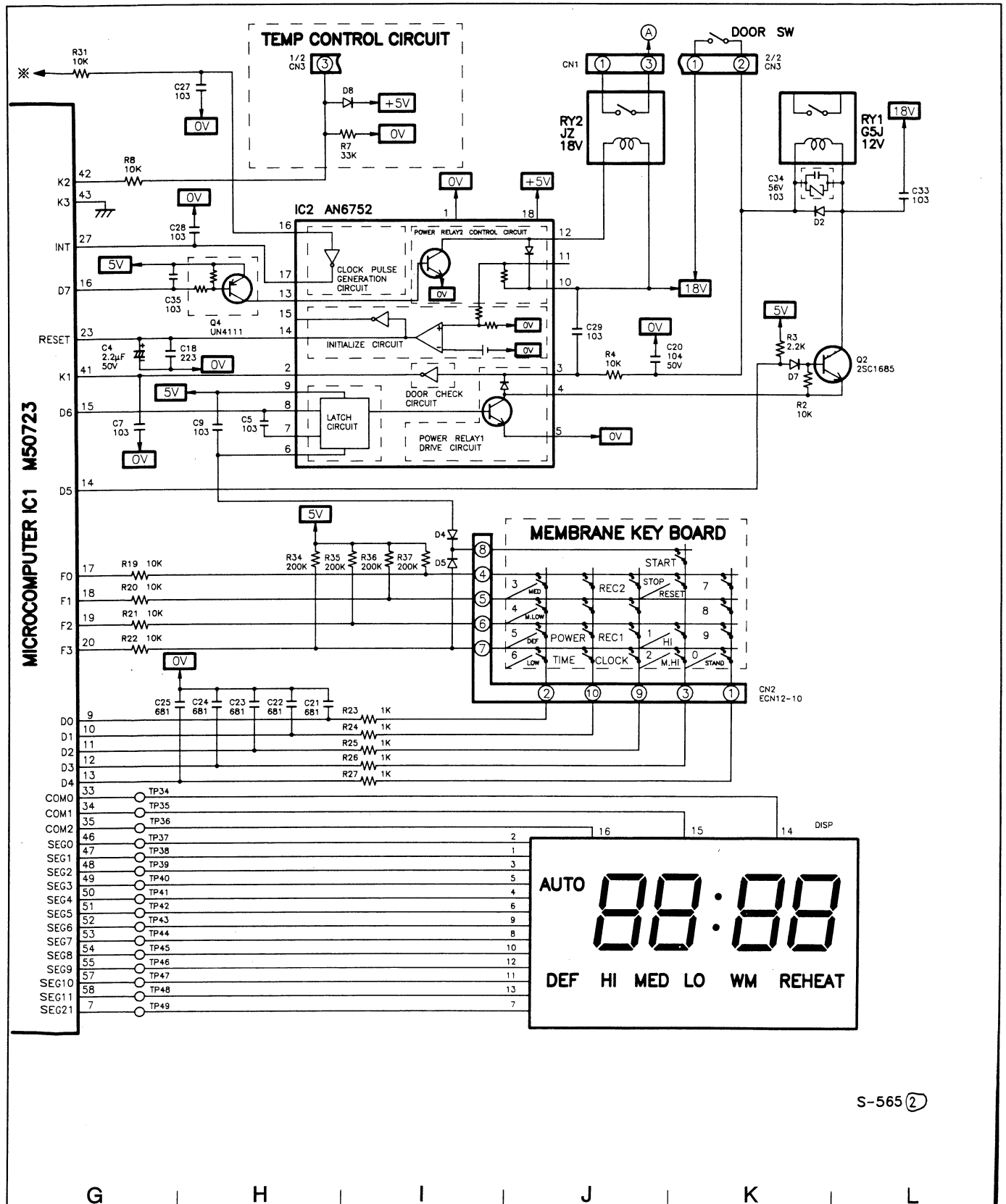
Waveforms shown above are appeared when oven is plugged in and 88:88 turns on in display window.

***JPR1**

MODEL NO.	JPR1
NN-7360	7.5kΩ
NN-6360	SHORT
NN-5360A	OPEN
MQS110W	39kΩ
MQS080W	18kΩ

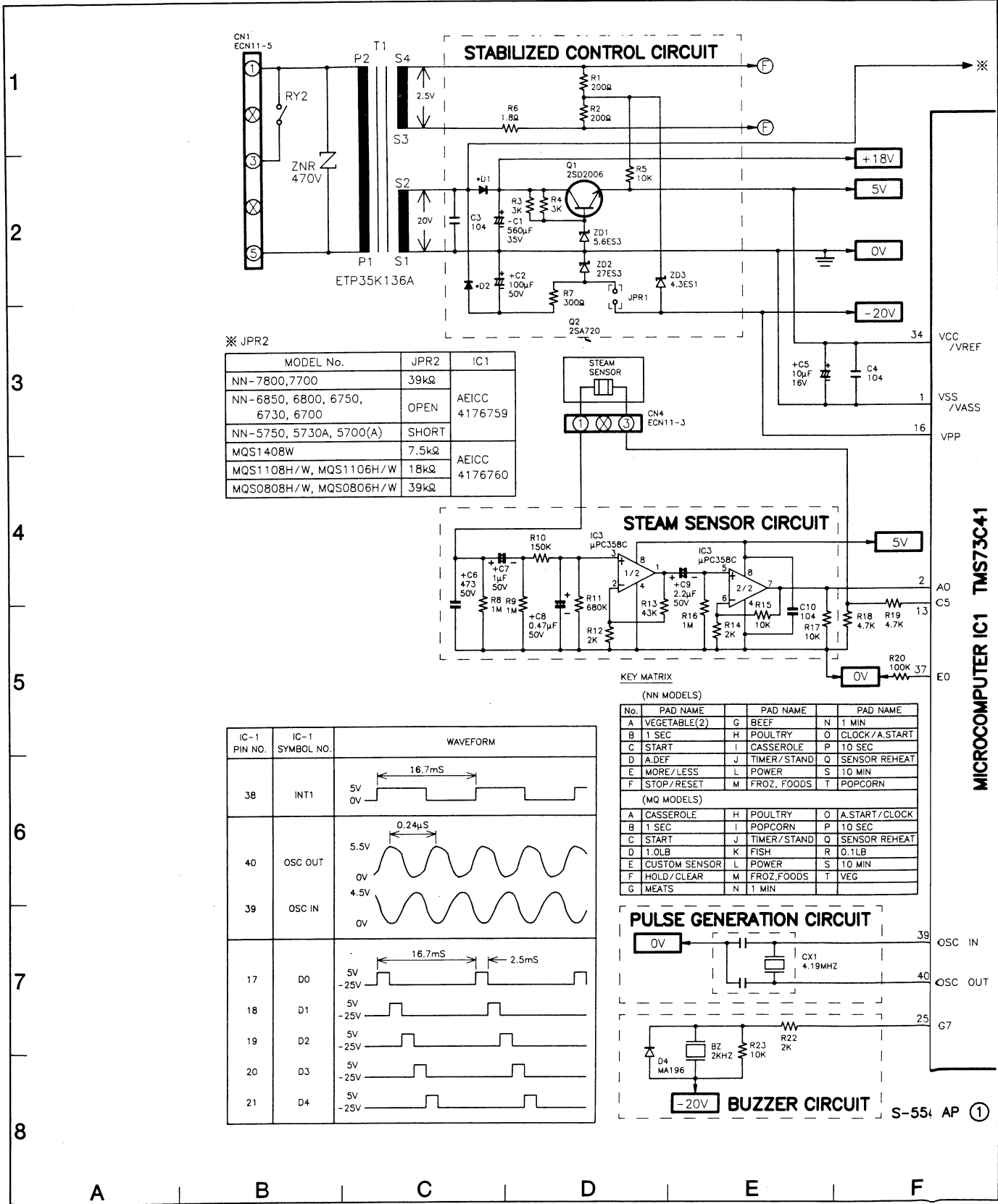
MICROCOMPUTER IC1 M50723

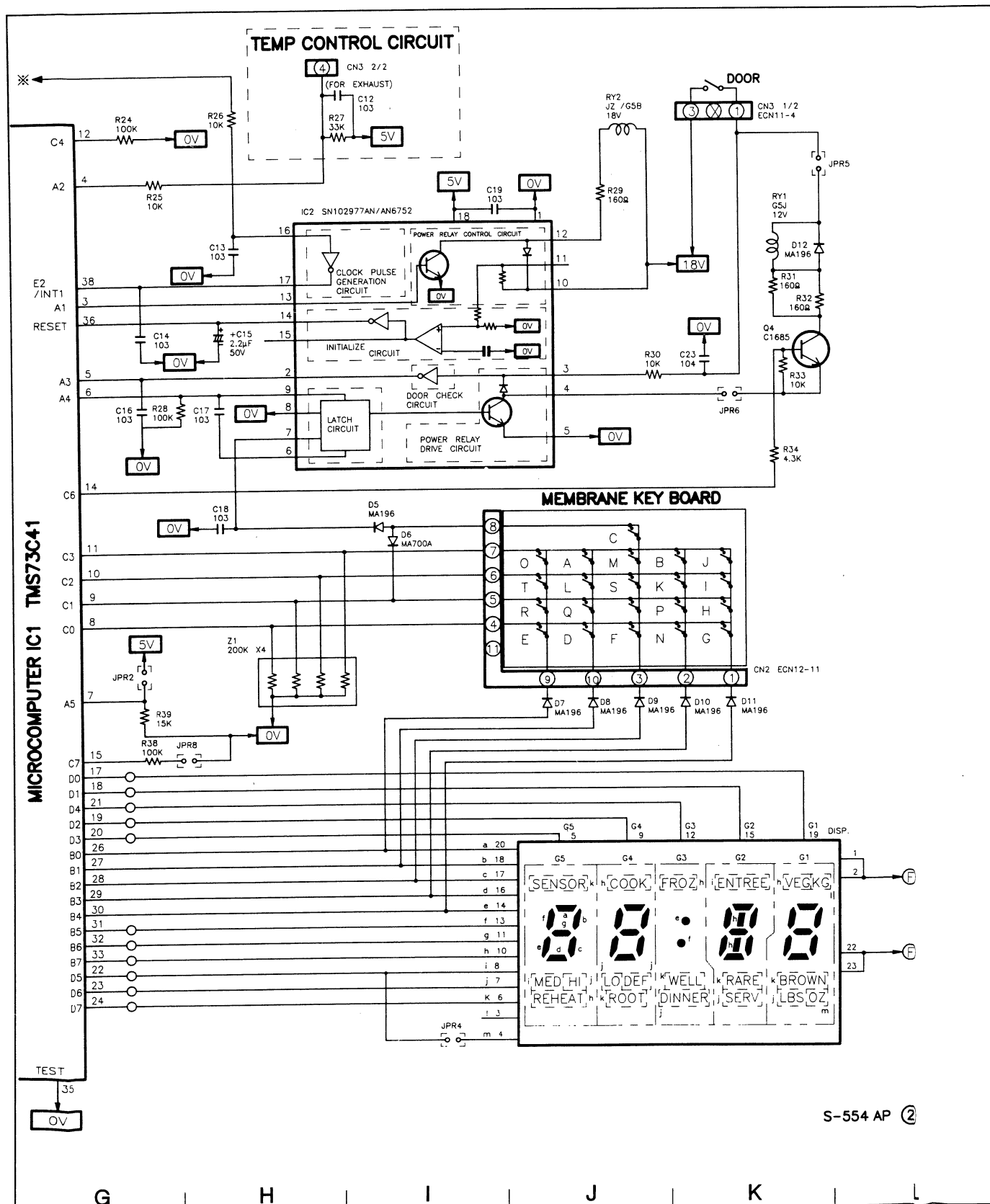
S-565 ①



DIGITAL PROGRAMMER CIRCUIT (Fluorescent Tube with Sensor Models)
NN-7800,NN-7700,NN-6850,NN-6800,NN-6750,NN-6730,NN-6700,NN-5750,NN-5700,NN-5730A,NN-5700A
MQS1408,MQS1108,MQS1106,MQS0808,MQS0806

SCHEMATIC DIAGRAM

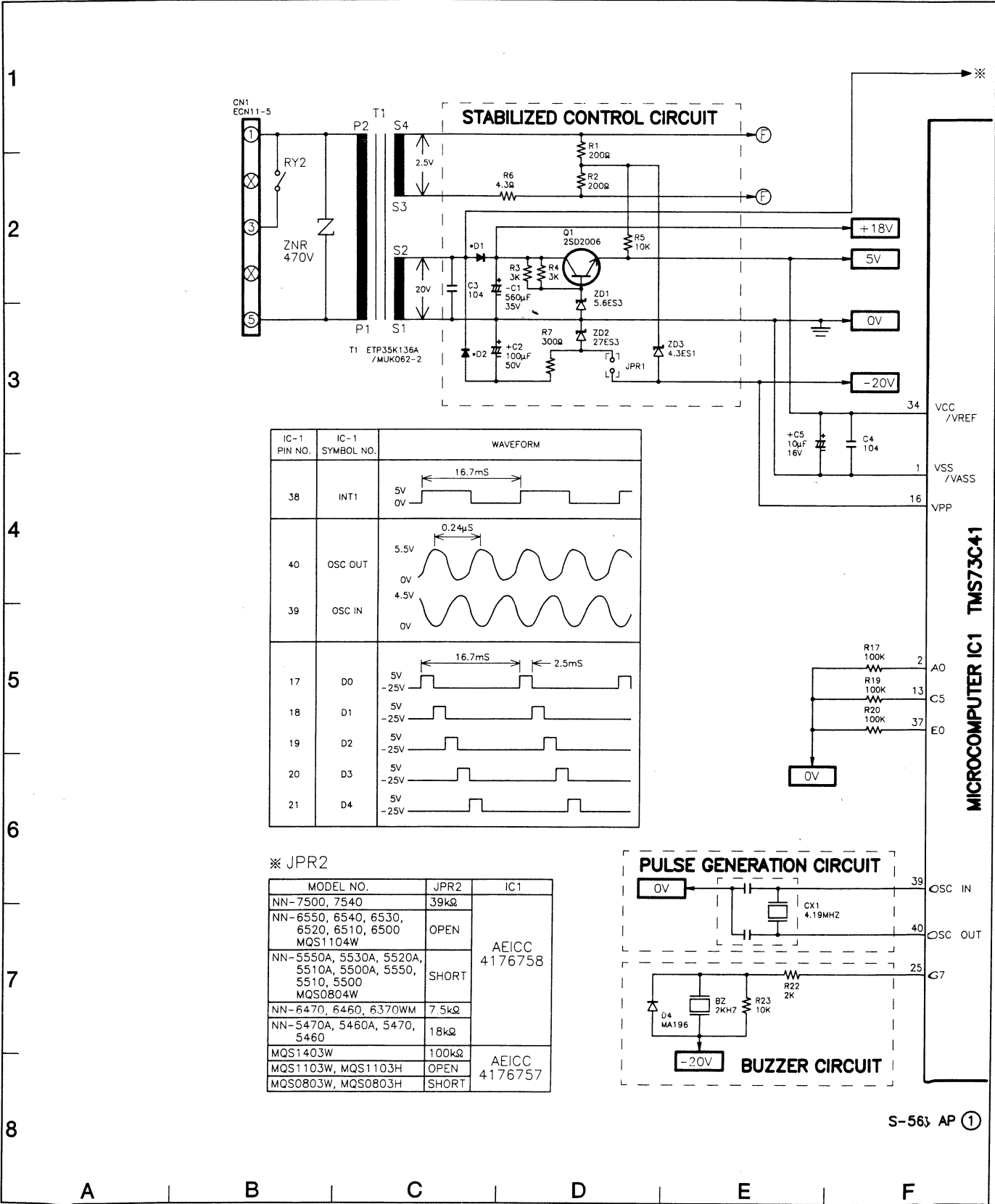


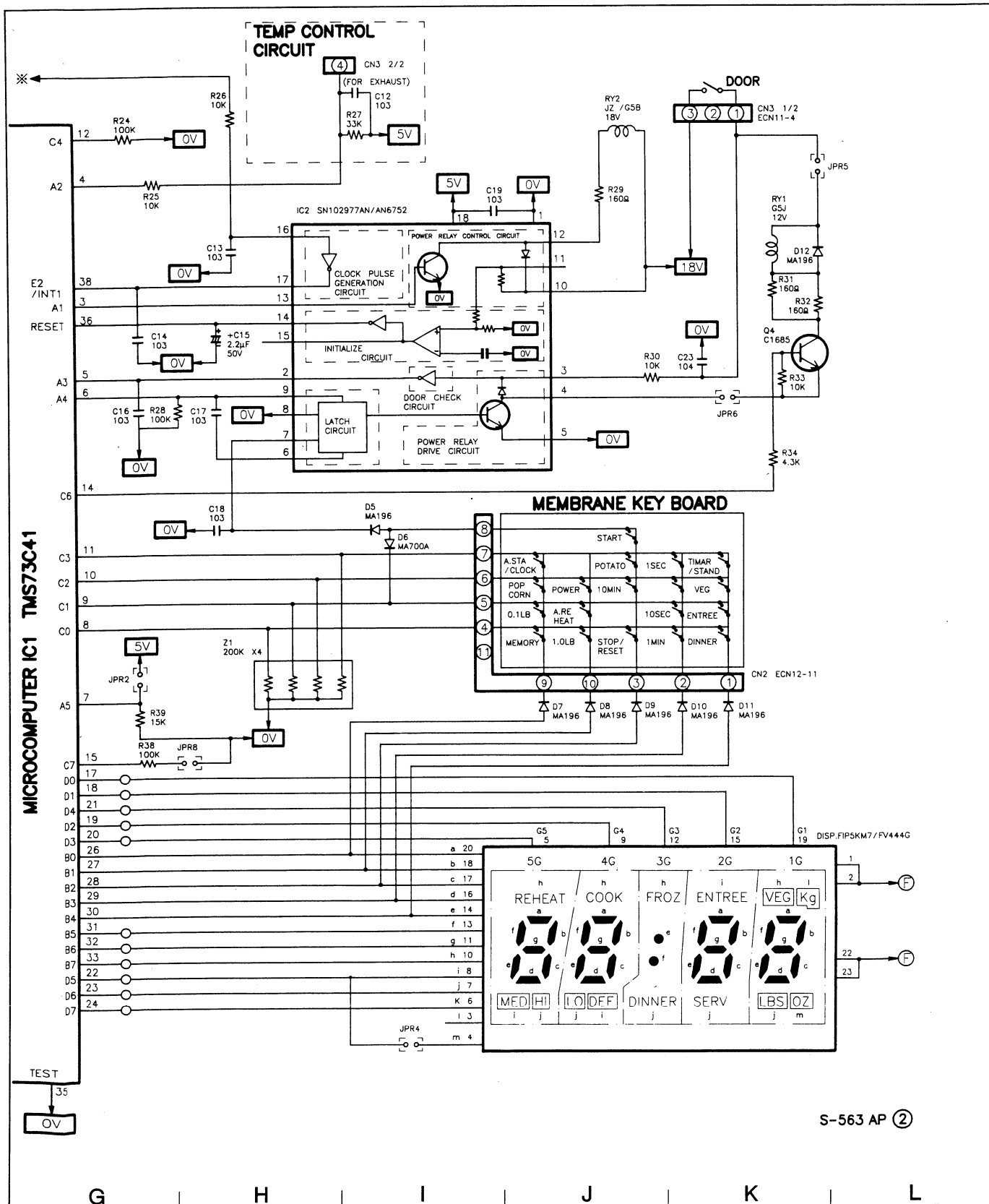


DIGITAL PROGRAMMER CIRCUIT (Fluorescent Tube without Sensor Models)

NN-7540, NN-7500, NN-6550, NN-6540, NN-6530, NN-6520, NN-6510, NN-6500, NN-6470, NN-6460, NN-6370WM, NN-5550, NN-5510, NN-5500, NN-5470, NN-5460, NN-5530A, NN-5520A, NN-5510A, NN-5500A, NN-5470A, NN-5460A
 MQS1403, MQS1104, MQS1103, MQS0804, MQS0803

SCHEMATIC DIAGRAM





DIGITAL PROGRAMMER CIRCUIT

PARTS LIST (L.C. Display Type Models)

Ref. No.	Part No.	Description	Pcs/Set	Remarks
DISP	A64565650AP	Liquid Crystal Display	1	
SPACER	A82845650AP	Spacer cushion	1	For DISP
T1	A62494000AP	Low Voltage Transformer	1	4.2VA ETP35K135A
CN1	AEEMMC01505W	5 pin connector	1	
CN2	AEEM11FDZBTM	11 pin connector	1	
CN3	AEEMMC00703W	3 pin connector	1	
BZ	AEFB17EP4001	Buzzer	1	4kHz
CX1	AEFFT2R50GW	Ceramic Resonator	1	2.5MHz
RY1	AEG5J1EG12B	Power Relay	1	(12V)
RY2	AEAWJZDC18A	Power Relay	1	(18V)
C26,34	EZCDB6R560M	Varistor	2	
ZNR	ERZC10DK471F	ZNR	1	
IC1	AEIC50723120	L.S.I. (MOS Microprocessor IC)	1	
IC2	AN6752	I.C.	1	
Q1	2SC1318-R	Transistor, Si 400mW	1	200MHz
Q2,3	2SC1685-R	Transistor, Si 250mW	2	150MHz
Q4	UN4111	Transistor, Si	1	
D1	AEDNERA1502	Diode, Si	1	(0.1A)
D2,4,5, 6,7,8	MA195	Diode, Si	6	(0.1A)
ZD1	AEDZ5R6ES3T1	Zener Diode, Si	1	RD5.6ES3
C1	ECEA1VU561YE	Electrolytic capacitor, Al	1	560 μ F, -10%+30%, 35V
C2	ECEA1CU100B	Electrolytic capacitor, Al	1	10 μ F, -10%+30%, 16V
C3,20	AECF50F104Z	Ceramic capacitor	2	0.1 μ F, -20%+80%, 50V

Ref. No.	Part No.	Description	Pcs/Set	Remarks
C4	ECEA1HU2R2B	Electrolytic capacitor, Al	1	2.2 μ F, -10%+30%, 50V
C5,7,9, 12,27,28, 29,33,35	ECBT1E103ZF5	Ceramic capacitor	9	0.01 μ F, -20%+ 80%, 25V
C17,18	ECBT1E223ZF5	Ceramic capacitor	2	(Single layer) 0.022 μ F, -20%+ 80%, 25V
C21,22, 23,24,25	ECBT1H681KB5	Ceramic capacitor	5	(Single layer) 680pF, -20%+80%, 50V
R1	ERDS2TJ302T	Carbon film resistor	1	3k Ω , $\pm$ 5%, 1/4W
R2,4,8, 9,19,20, 21,22,28, 29,31	ERDS2TJ103T	Carbon film resistor	11	10k Ω , $\pm$ 5%, 1/4W
R3	ERDS2TJ222T	Carbon film resistor	1	2.2k Ω , $\pm$ 5%, 1/4W
R7	ERDS2TJ333T	Carbon film resistor	1	33k Ω , $\pm$ 5%, 1/4W
R12	ERDS2TJ153T	Carbon film resistor	1	15k Ω , $\pm$ 5%, 1/4W
R13	ERDS2TJ105T	Carbon film resistor	1	1M Ω , $\pm$ 5%, 1/4W
R15	ERDS2TJ242T	Carbon film resistor	1	2.4k Ω , $\pm$ 5%, 1/4W
R16,17, 18,23,24, 25,26,27	ERDS2TJ102T	Carbon film resistor	8	1.0k Ω , $\pm$ 5%, 1/4W
R34,35, 36,37	ERDS2TJ204T	Carbon film resistor	4	200k Ω , $\pm$ 5%, 1/4W
JPR1	ERD25VJ752T	Carbon film resistor	(1)	MQS080W 7.5k Ω , $\pm$ 5%, 1/4W

PARTS LIST (Fluorescent Tube with Sensor Models)

Ref. No.	Part No.	Description	Pcs/Set	Remarks
DISP	A64565540AP	Fluorescent Tube	1	
SPACER	A82845540AP	Spacer cushion	1	For DISP
T1	A62494010AP	Low Voltage Transformer	1	4.3VA ETP35K136A
CN1	AEEMMC01505W	5 pin connector	1	
CN2	AEEM11FDZBTM	11 pin connector	1	
CN3	AEEMMC00F04W	4 pin connector	1	
CN4	AEEMMC00703W	3 pin connector	1	
BZ	AEFB22EP2002	Buzzer	1	2kHz
CX1	AEFFT4R19GW	Ceramic Resonator	1	4.19MHz
RY1	AEG5J1EG12B	Power Relay	1	(12V)
RY2	AEAWJZDC18A	Power Relay	1	(18V)
ZNR	ERZC10DK471F	ZNR	1	
IC1	AEICC4176759	L.S.I. (MOS Microprocessor IC)	(1)	NN-5750/5730A/5700 NN-5700A MQS0808W /MQS0808H MQS0806W /MQS0806H
	AEICC4176760	L.S.I. (MOS Microprocessor IC)	(1)	
IC2	AN6752	I.C. (Bipolar Linear IC)	1	
IC3	AEICUPC358C	I.C.	1	
Q1	2SD2006-R	Transistor, Si 1.2W	1	100MHz
Q4	2SC1685-R	Transistor, Si 250mW	1	150MHz
D1,2	AEDNERA1502	Diode, Si	2	(0.1A)
D4,5,7, 8,9,10, 11,12	MA196	Diode, Si	8	(0.1A)
D6	MA700A	Diode, Si	1	(0.03A)
D10	AESMAC03DGM	Triac	1	
ZD1	AEDZ5R6ES3T1	Zener Diode, Si	1	RD5.6ES3
ZD2	AEDZ27ES3T1	Zener Diode, Si	1	RD27ES3
ZD3	AEDZ4R3ES1T1	Zener Diode, Si	1	RD4.3ES1
C1	ECEA1VU561YE	Electrolytic capacitor, Al	1	560 μ F, -10%+30%, 35V

Ref. No.	Part No.	Description	Pcs/Set	Remarks
C2	ECEA1HU101B	Electrolytic capacitor, Al	1	100 μ F, -10%+30%, 50V
C3,4,10, 23	AECF50F104Z	Ceramic capacitor	4	(Single layer) 0.1 μ F, -10%+80%, 50V
C5	ECEA1CU100B	Electrolytic capacitor, Al	1	10 μ F, -10%+30%, 16V
C6	ECKR1H473ZF	Ceramic capacitor	1	(Single layer) 0.047 μ F, -20%+ 80%, 50V
C7	ECEA1HU010B	Electrolytic capacitor, Al	1	1.0 μ F, -10%+30%, 50V
C8	ECEA1HUR47B	Electrolytic capacitor, Al	1	0.47 μ F, -10%+30%, 50V
C9,15	ECEA1HU2R2B	Electrolytic capacitor, Al	2	220 μ F, -10%+30%, 50V
C12,13,14, 16,17,18, 19	ECBT1E103ZF5	Ceramic capacitor	7	(Single layer) 0.01 μ F, -20%+80%, 25V
R1,2	ERDS2TJ201T	Carbon film resistor	2	200k Ω , $\pm$ 5%, 1/4W
R3,4	ERDS2TJ302T	Carbon film resistor	2	3.0k Ω , $\pm$ 5%, 1/4W
R5,15,17, 23,25,26, 30,33	ERDS2TJ105T	Carbon film resistor	8	10k Ω , $\pm$ 5%, 1/4W
R6	ERDS2TJ1R8T	Carbon film resistor	1	1.8 Ω , $\pm$ 5%, 1/4W
R7	ERDS2TJ301T	Carbon film resistor	1	300 Ω , $\pm$ 5%, 1/4W
R8,9,16	ERDS2TJ105T	Carbon film resistor	3	1M Ω , $\pm$ 5%, 1/4W
R10	ERDS2TJ154T	Carbon film resistor	1	150k Ω , $\pm$ 5%, 1/4W
R11	ERDS2TJ684T	Carbon film resistor	1	680k Ω , $\pm$ 5%, 1/4W
R12,14,22	ERDS2TJ202T	Carbon film resistor	3	2k Ω , $\pm$ 5%, 1/4W
R13	ERDS2TJ433T	Carbon film resistor	1	43k Ω , $\pm$ 5%, 1/4W
R18,19	ERDS2TJ472T	Carbon film resistor	2	4.7k Ω , $\pm$ 5%, 1/4W
R20,24,28, 38	ERDS2TJ104T	Carbon film resistor	4	100k Ω , $\pm$ 5%, 1/4W

Ref. No.	Part No.	Description	Pcs/ Set	Remarks
R27	ERDS2TJ333T	Carbon film resistor	1	33k Ω , $\pm 5\%$, 1/4W
R29,31,32	ERDS2TJ161T	Carbon film resistor	3	160 Ω , $\pm 5\%$, 1/4W
R34	ERDS2TJ432T	Carbon film resistor	1	4.3k Ω , $\pm 5\%$, 1/4W
R39	ERDS2TJ153T	Carbon film resistor	1	15k Ω , $\pm 5\%$, 1/4W

Ref. No.	Part No.	Description	Pcs/ Set	Remarks
Z1	AEXBM4X204JT	Compound resistor	1	200k Ω $\times$ 4, $\pm 5\%$, 1/8W
JPR2	ERD25VJ393T	Carbon film resistor	(1)	MQS0808W /MQS0808H MQS0806W /MQS0806H 39k Ω , $\pm 5\%$, 1/4W

PARTS LIST (Fluorescent Tube without Sensor Models)

Ref. No.	Part No.	Description	Pcs/ Set	Remarks
DISP	A64565630AP	Fluorescent Tube	1	
SPACER	A82845570AP	Spacer cushion	1	For DISP
T1	A62494010AP	Low Voltage Transformer	1	4.3VA ETP35K136A
CN1	AEEMMC01505W	5 pin connector	1	
CN2	AEEM11FDZBTM	11 pin connector	1	
CN3	AEEMMC00F04W	4 pin connector	1	
BZ	AEFB22EP2002	Buzzer	1	2kHz
CX1	AEFFT4R19GW	Ceramic Resonator	1	4.19MHz
RY1	AEG5J1EG12B	Power Relay	1	(12V)
RY2	AEAWJZDC18A	Power Relay	1	(18V)
ZNR	ERZC10DK471F	ZNR	1	
IC1	AEICC4176758	L.S.I.	(1)	NN-5530A/5520A /5510A NN-5500A/5470A /5460A NN-5510/5500 /5470 NN-5460 /MQS0804W MQS0803W /MQS0803H
		(MOS Microprocessor IC)		
	AEICC4176757	L.S.I.	(1)	
		(MOS Microprocessor IC)		
IC2	AN6752	I.C. (Bipolar Linear IC)	1	
IC3	AEICUPC358C	I.C.	1	
Q1	2SD2006-R	Transistor, Si 400mW	1	200MHz
Q4	2SC1685-R	Transistor, Si 250mW	1	150MHz
D1,2	AEDNERA1502	Diode, Si	2	(0.1A)
D4,5,7,8,9,10,11,12	MA196	Diode, Si	8	(0.1A)
D6	MA700A	Diode, Si	1	(0.03A)
ZD1	AEDZ5R6ES3T1	Zener Diode, Si	1	RD5.6ES3
ZD2	AEDZ27ES3T1	Zener Diode, Si	1	RD27ES3
ZD3	AEDZ4R3ES1T1	Zener Diode, Si	1	RD4.3ES1

Ref. No.	Part No.	Description	Pcs/ Set	Remarks
C1	ECEA1VU561YE	Electrolytic capacitor, Al	1	560 μ F, $-10\%+30\%$, 35V
C2	ECEA1HU101B	Electrolytic capacitor, Al	1	100 μ F, $-10\%+30\%$, 50V
C3,4,23	AECF50F104Z	Ceramic capacitor	3	(Single layer) 0.1 μ F, $-10\%+80\%$, 50V
C5	ECEA1CU100B	Electrolytic capacitor, Al	1	10 μ F, $-10\%+30\%$, 16V
C12,13,14,16,17,18,	ECBT1E103ZF5	Ceramic capacitor	7	(Single layer) 0.01 μ F, $-20\%+80\%$, 25V
19				
C15	ECEA1HU2R2B	Electrolytic capacitor, Al	1	2.2 μ F, $-10\%+30\%$, 50V
R1,2	ERDS2TJ201T	Carbon film resistor	2	20k Ω , $\pm 5\%$, 1/4W
R3,4	ERDS2TJ302T	Carbon film resistor	2	3.0k Ω , $\pm 5\%$, 1/4W
R5,23,25,26,30,33	ERDS2TJ105T	Carbon film resistor	8	10k Ω , $\pm 5\%$, 1/4W
R6	ERDS2TJ4R3T	Carbon film resistor	1	4.3k Ω , $\pm 5\%$, 1/4W
R7	ERDS2TJ301T	Carbon film resistor	1	30k Ω , $\pm 5\%$, 1/4W
R17,19,20,24,28,38	ERDS2TJ104T	Carbon film resistor	6	10k Ω , $\pm 5\%$, 1/4W
R22	ERDS2TJ202T	Carbon film resistor	1	2k Ω , $\pm 5\%$, 1/4W
R27	ERDS2TJ333T	Carbon film resistor	1	33k Ω , $\pm 5\%$, 1/4W
R29,31,32	ERDS2TJ161T	Carbon film resistor	3	16k Ω , $\pm 5\%$, 1/4W
R34	ERDS2TJ432T	Carbon film resistor	1	4.3k Ω , $\pm 5\%$, 1/4W
R39	ERDS2TJ153T	Carbon film resistor	1	15k Ω , $\pm 5\%$, 1/4W
Z1	AEXBM4X204JT	Compound resistor	1	20k Ω $\times$ 4, $\pm 5\%$, 1/8W
JPR2	ERD25VJ183T	Carbon film resistor	(1)	NN-5470A/5460A NN-5470/5460 18k Ω , $\pm 5\%$, 1/4W

SERVICE FIXTURES AND TOOLS

EXTENSION CABLES

NOTE: To be used when repairing the DPC board assembly directly on the oven for easy access of the board.

Ref. No.	Part No.	Description	Pcs/ Set	Remarks
	AT40M003	3 pin Extension Cable	1	Cable No. 36
	AT40M004	4 pin Extension Cable	1	Cable No. 16
	AT40M005	5 pin Extension Cable	1	Cable No. 17
	AT40E006	1 pin $\times$ 6 Extension Cable	1	Cable No. 9

DPC COMMON CHECKER AND ITS CABLE

NOTE: To be used only when DPC common checker is available.

Ref. No.	Part No.	Description	Pcs/ Set	Remarks
	ANE600ZK70AP	DPC. Common Checker	1	
	AT30A5500AP	DPC. Checker Cable	1	NOTE

